**BAB V**

**KESIMPULAN DAN IMPLIKASI MANAJERIAL**

**5.1. Kesimpulan**

**5.1.1. Profil Responden**

Responden dalam penelitian ini berjumlah 158 dengan karakteristik usia 77% responden adalah kelompok dewasa dan sisanya 23% adalah kelompok remaja. Berdasarkan jenis kelamin 85% responden adalah laki-laki dan 15% adalah perempuan. Berdasarkan tingkat pendidikan 51% responden memiliki tingkat pendidikan S1, 44% responden memiliki tingkat pendidikan SMA/sederajat, 4% responden memiliki tingkat pendidikan S2 dan 1% responden memiliki tingkat pendidikan SMP/sederajat. Berdasarkan jenis pekerjaan, 43% responden adalah mahasiswa/pelajar, 30% adalah karyawan swasta, 8% adalah karyawan negeri, 13% adalah wiraswasta dan 6% lain-lain.

**5.1.2. Hasil Temuan**

Pengaruh sikap konsumen terhadap lingkungan, tingkat etnosentris, Keinginan mencari informasi produk ramah lingkungan, kesesuaian gambaran diri, nilai sosial terhadap MOBNAS ramah lingkungan dan efisiensi emisi terhadap niat pembelian MOBNAS ramah lingkungan  dijabarkan sebagai berikut:

1.     sikap konsumen terhadap lingkungan, tingkat etnosentris, Keinginan mencari informasi produk ramah lingkungan, kesesuaian gambaran diri, nilai sosial terhadap MOBNAS ramah lingkungan dan efisiensi emisi

memiliki kemampuan sebesar 41% dalam mempengaruhi niat pembelian MOBNAS ramah lingkungan.

2. Sikap konsumen terhadap lingkungan tidak memiliki pengaruh yang signifikan terhadap niat pembelian MOBNAS ramah lingkungan

3. Etnosentris memiliki pengaruh positif dan signifikan terhadap niat pembelian MOBNAS ramah lingkungan

4. Keinginan mencari informasi produk ramah lingkungan tidak memiliki pengaruh yang signifikan terhadap niat pembelian MOBNAS ramah lingkungan

5. kesesuaian gambaran diri tidak memiliki pengaruh yang signifikan terhadap niat pembelian MOBNAS ramah lingkungan

6. nilai sosial terhadap MOBNAS ramah lingkungan memiliki pengaruh positif dan signifikan terhadap niat pembelian MOBNAS ramah lingkungan

7. efisiensi emisi memiliki pengaruh positif dan signifikan terhadap niat pembelian MOBNAS ramah lingkungan

## 5.2. Implikasi Manajerial

Dalam memutuskan membeli, konsumen tidak membuat keputusan mereka dalam suatu ruang yang hampa. Pembelian mereka sangat dipengaruhi oleh faktor-faktor budaya, sosial, pribadi dan psikologis (Kotler 2003:184).

Secara umum sikap responden terhadap lingkungan cukup positif. Sikap positif ini ternyata tidak berpengaruh secara parsial terhadap niat membeli

MOBNAS ramah lingkungan. 34% konsumen masih merasa bahwa mobil konvensional lebih dapat diandalkan daripada mobil ramah lingkungan. Penelitian yang dilakukan di Amerika Serikat, menegaskan bahwa masyarakat pada umumnya berkendara kurang dari 160 km perhari(Pooley,2011). Yang artinya masih dalam jangkauan rata-rata mobil ramah lingkungan. Belum terbiasanya dengan teknologi ramah lingkungan yang berkendara berdasarkan jarak tempuh bukan berdasarkan jumlah bahan bakar yang dibutuhkan menyebabkan ketakutan masyarakat akan ketersediaan *charging area* atau lamanya waktu pengisian daya

Secara umum, responden mengambarkan bahwa tingkat etnosentris orang Indonesia tinggi. Hipotesis peneliti mengambarkan bahwa orang Indonesia memiliki sifat *low* etnosentris dan menyebabkan minimnya niat membeli MOBNAS ramah lingkungan. Tetapi pada hasil penelitian ini membuktikan bahwa konsumen Indonesia memiliki tingkat etnosentris tinggi sehingga berpengaruh terhadap niat beli MOBNAS ramah lingkungan.

Jika dibandingkan dengan penelitian terdahulu (Oliver *et al*,2010), variabel INFO (Keinginan mencari informasi produk ramah lingkungan) berpengaruh positif baik pada negera individualis seperti Amerika Serikat maupun negara kolektif seperti Korea Selatan. Tetapi dampaknya lebih tinggi pada negara individualis seperti Amerika Serikat. Pada penelitian yang dilakukan di Indonesia ditemukan tidak ada pengaruh yang signifikan secara parsial mengenai Keinginan mencari informasi produk ramah lingkungan dengan niat membeli MOBNAS ramah lingkungan. Hal ini mungkin disebabkan oleh kurang tertariknya konsumen untuk mengetahui lebih jauh informasi produk yang mereka gunakan. Pada

penelitian ini terdapat hanya 31% responden yang tertarik untuk mencari informasi produk yang mereka gunakan.

Jika dibandingkan dengan penelitian terdahulu (Oliver *et al*,2010), variabel CITRA (kesesuaian gambaran diri) berpengaruh positif baik pada negera individualis seperti Amerika Serikat maupun negara kolektif seperti Korea Selatan. Tetapi dampaknya lebih tinggi pada negara individualis seperti Amerika Serikat. Pada penelitian ini ditemukan bahwa penggunaan MOBNAS ramah lingkungan memberikan citra positif bagi penggunanya tetapi tidak ditemukan pengaruh yang signifikan secara parsial mengenai kesesuaian gambaran diri dengan niat membeli MOBNAS ramah lingkungan.. Negara kolektif seperti Indonesia berusaha untuk menjaga lingkungan lebih kepada cara tradisional daripada cara yang modern, sehingga cara tradisional ini yang menjadi gambaran pribadi orang asia (Oliver *et al*,2010).

Jika dibandingkan dengan penelitian terdahulu (Oliver *et al*,2010), variabel NSOSMOB (nilai sosial terhadap MOBNAS ramah lingkungan) berpengaruh positif baik pada negera individualis seperti Amerika Serikat maupun negara kolektif seperti Korea Selatan. Tetapi dampaknya lebih tinggi pada negara kolektif seperti Korea Selatan. Pada penelitian yang dilakukan di Indonesia ditemukan pengaruh yang signifikan secara parsial mengenai nilai sosial terhadap MOBNAS ramah lingkungan dengan niat membeli MOBNAS ramah lingkungan. Hal ini karena Indonesia yang merupakan bagian negara asia merupakan negara-negara yang bersifat kolektif(Oliver *et al*,2010).

Jika dibandingkan dengan penelitian terdahulu (Oliver *et al*,2010), variabel EEMISI (efisiensi emisi). Tidak berpengaruh negatif baik pada negera individualis seperti Amerika Serikat maupun negara kolektif seperti Korea Selatan. Pada negara kolektif seperti Korea Selatan, inti dari berkendara bukan pada efisiensi emisi tetapi pada nilai sosial yang terkandung dari mengendarai mobil (Oliver *et al*,2010). Pada penelitian yang dilakukan di Indonesia ditemukan pengaruh yang signifikan secara parsial mengenai efisiensi emisi dengan niat membeli MOBNAS ramah lingkungan. Hal ini bisa disebabkan oleh dampak secara positif bagi lingkungan jika memiliki MOBNAS ramah lingkungan yaitu menekan emisi demi lingkungan yang lebih baik.

Tingkat etnosentris yang tinggi berpengaruh dalam niat membeli, karena kecintaan terhadap produk dalam negeri menjadi motivasi dan pemicu dalam mengunakan produk dalam negeri. Perusahaan harus menangkap hal ini sebagai peluang untuk terus meningkatkan rasa cinta terhadap produk dalam negeri sehingga kecintaan akan produk tersebut akan meningkatkan kuantitas pembelian produk dalam negeri. Dalam hal ini juga dibutuhkan kerja sama perusahaan dan pemerintah agar produk-produk dalam negeri bukan lagi mampu bersaing tetapi mampu menguasai pasar lokal dalam negeri. Pada jaman orde baru pemerintah memiliki slogan ACI : AKU CINTA INDONESIA dimana produk-produk Indonesia digalakan untuk mendapat tempat diantara produk-produk asing yang membanjiri pasar domestik. Setidaknya pemerintah berusaha menekan konsumsi produk dalam negeri agar geliat ekonomi pada saat itu semakin beranjak sehingga industri Indonesia dapat berkembang. Tetapi pada tahun 1997-1998 dimana krisis

ekonomi melanda Indonesia dan negara-negara ASEAN lainnya kontrol terhadap produk asing terpecah dengan upaya perbaikan ekonomi yang hasilnya mulai kita rasakan pada tahun-tahun ini dimana pertumbuhan ekonomi Indonesia berada pada tingkat 6,4% (investor.co.id,2012). Pertumbuhan ekonomi tidak saja dialami oleh Indonesia, China mengalami pertumbuhan yang lebih pesat dimana ekonomi China bertumbuh pada tingkat 8,7% (investor.co.id,2012). Pertumbuhan ekonomi China berdampak pada masuknya investor asing yang melakukan *outsourcing* produksi sehingga biaya produk semakin lebih murah. Hal ini mengakibatkan banjirnya produk made in china di pasaran dunia khususnya Indonesia. Ditambah lagi diberlakukannya CAFTA (*China – ASEAN Freetrade Area*) pada tahun 2010 sehingga produk-produk China bisa masuk dengan mudah. Dalam hal ini jika tidak ditinjau dengan baik produksi lokal akan kalah bersaing dengan kapasitas produksi dari China, karena produk yang masuk selain baik secara kualitas tetapi juga besar dalam kemampuan produksi. Pemerintah dalam hal ini harus mengambil tindakan tepat untuk menjaga geliat produk dalam negeri. Jika berdasarkan penelitian ini diketahui bahwa tingkat entosentris orang Indonesia tinggi maka hal ini harus menjadi pertanda untuk membangkitkan industri dalam negeri. Pemerintah perlu membentuk kerjasama yang baik dengan pihak China untuk dapat memproduksi produk lokal dengan biaya murah tetapi berkualitas dan hak cipta dan paten tetap dimiliki oleh anak bangsa. Sehingga walaupun produk di produksi di luar Indonesia tetapi secara kepemilikan itu adalah produk Indonesia. Bagi perusahaan, etnosentris harus dilihat sebagai peluang untuk mengembangkan produk dalam negeri dengan lebih profesional. Perusahaan yang ada harus

mendukung dan menjaga semangat etnonsentris sehingga geliat konsumnsi produk dalam negeri tetap terjaga. Kehidupan sosial bagi penduduk asia seperti Indonesia sangatlah penting, sehingga niat membeli sering muncul bukan dari keinginan pribadi tetapi dari masukan atau pemikiran orang yang ada disekitar. Hal ini harus dilihat baik oleh perusahaan sebagai masukan untuk meningkatkan nilai perusahaan. WOM (*word of Mouth*) yang beredar dimasyarakat harus diarahkan pada persepsi positif terhadap produk dalam negeri baik kualitas dan kuantitas produk. Persepsi positif akan disampaikan positif kepada calon konsumen oleh *opinion leader* yang ada dimasyarakat. Pada era tahun 1996-1998 Indonesia sempat memiliki mobil Timor dan Bimantara. Walaupun tidak secara utuh adalah milik Indonesia tetapi mobil produksi korea yang dibeli tanpa merk sehingga diberi merk Timor dan Bimantara(modifikasi.com,2012). Konsumen Indonesia cukup antusias dengan keberadaan mobil Timor sehingga permintaan untuk mobil ini cukup tinggi. Ketika itu *image* ACI (Aku Cinta Indonesia) sedang digalakan sehingga menjadi kebanggaan ketika menggunakan mobil Timor. Desakan untuk mengikuti trend penggunaan mobil timor saat itu menyebabkan banyak keluarga yang membeli mobil Timor, hal ini bisa dijadikan indikator bahwa nilai sosial berpengaruh dalam keputusan pembelian mobil. Ketika pengambil keputusan dipengaruhi oleh sekelilingnya maka keputusan yang diambil adalah keputusan bersama (mufakat). Hal ini menjadi indikator bagi perusahaan untuk terus mengembangkan produk sekaligus membangun *image* dari mulut ke mulut dan menjaga kualitas produk. Emisi atau dalam kehidupan sehari-hari dikenal oleh masyarakat awam sebagai gas buang kendaraan memang harus

selalu dijaga kualitas dan kuantitasnya. Perusahaan harus mampu menangkap keinginan konsumen untuk memiliki kendaraan yang gas buangnya tidak mencemari lingkungan sehingga udara yang ada tidak tercemar. Pencemaran udara di kota besar di Indonesia sudah sangat mengkawatirkan. Perusahaan juga bisa menangkap bahwa sebenarnya konsumen pengguna kendaraan bermotor di Indonesia memiliki keinginan secara pribadi untuk mengurangi gas buang demi mendapatkan udara yang baik. Hal ini bisa menjadi salah satu tema kampanye dalam penggunaan mobil/kendaraan ramah lingkungan. Karena ketika udara yang dihasilkan baik maka produktivitas masyarakat akan lebih baik.

### 5.3.Keterbatasan dan Saran

### 5.3.1. Keterbatasan Penulisan

Penelitian ini banyak keterbatasannya. Keterbatasan ini berdampak pada hasil penelitian secara umum. Penelitian ini menggunakan metode purposive sampling dimana informasi dikumpulan berdasarkan grup sample. Sample penelitian ini berjumlah 158 responden. Hal ini tentu tidak mewakili masyarakat pengguna mobil di Indonesia sesungguhnya. Selain itu, responden yang dipilih adalah komunitas mobil yang telah beredar di Indonesia pada umumnya, bukan pemilik MOBNAS ramah lingkungan.

Banyak variabel yang seharusnya bisa diangkat menjadi pengaruh terhadap niat pembelian MOBNAS ramah lingkungan. Jika variabel ditambahkan maka tentunya kriteria pembelian MOBNAS ramah lingkungan menjadi lebih jelas. Penelitian ini hanya membahas MOBNAS ramah lingkungan, penelitian

selanjutnya bisa membahas MOBNAS secara umum maupun perbandingan MOBNAS dengan mobil-mobil dari pabrikan asing.

### 5.3.2. Saran

Rekomendasi yang dapat diberikan untuk penelitian selanjutnya adalah :

1. Mengubah produk MOBNAS menjadi produk nasional ramah lingkungan yang lain

2. Mengubah atau menambahkan variabel lain yang mempengaruhi niat beli MOBNAS ramah lingkungan

3. Melakukan penelitian dengan sebaran yang lebih besar dan mengambarkan populasi yang sesungguhnya.

4. Melakukan perbandingan antara MOBNAS ramah lingkungan dan mobil konvensional maupun mobil ramah lingkungan milik produk luar.

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**UNIVERSITAS ATMA JAYA YOGYAKARTA**
**PROGRAM PASCASARJANA**
**PROGRAM STUDI MAGISTER MANAJEMEN**

Dengan Hormat,

Sehubungan dengan penulisan thesis saya yang berjudul :
**Pengaruh Tingkat Etnosentris, Nilai Sosial Terhadap Potensi Niat Pembelian Mobil Nasional Ramah Lingkungan.** Saya memohon kesediaan bapak/ibu/saudara/Saudari untuk meluangkan waktu mengisi kuesioner ini.

Kuisoner ini dibagi menjadi 3 bagian. Bagian pertama berhubungan dengan sikap terhadap lingkungan. Bagian kedua akan berhubungan dengan tingkat etnosentris dan bagian ketiga akan berhubungan dengan MOBNAS(mobil nasional) ramah lingkungan.

Ketepatan dan keakuratan pengukuran variable-variabel yang ada dalam penelitian ini akan sangat tergantung pada kebenaran dan kejujuran Anda dalam pengisian jawaban yang didasarkan pada situasi sesungguhnya yang terjadi. Data yang telah diperoleh akan dijaga kerahasiannya serta digunakan semata-mata untuk penelitian ini. Atas kesediaan Anda mengisi kueisioner ini saya ucapkan terima kasih.

Hormat saya,

Si Putu Horis Salomo
horis_salomo2010@yahoo.com
081805332654

## A. Data Responden

*Berilah tanda silang (x) pada setiap jawaban yang anda pilih*

1. Nama       :...................................................(*Boleh tidak diisi*)
2. Umur       :......................(*Silahkan dituliskan*)
3. Jenis kelamin :
     1. Laki-laki
     2. Perempuan
4. Tingkat Pendidikan Terakhir :
     1. SMP/sederajat
     2. SMA/sederajat
     3. S1
     4. S2
     5. S3
5. Pekerjaan     :
     1. Mahasiswa/Pelajar
     2. Karyawan Swasta
     3. Karyawan Negeri
     4. Wiraswasta
     5. LSM
     6. Lain-lain....................................(*silahkan diisi*)

6. Komunitas/organisasi :................................................(*silahkan diisi*)

7. Tipe dan merk mobil saya :..........................................(*silahkan diisi*)

8. Nomor Polisi : ..............................................................(*silahkan diisi*)

## BAGIAN 1

**Petunjuk:** *berilah tanda silang(x) pada huruf yang paling sesuai dengan penilaian Anda terhadap masing-masing pernyataan berikut ini, dengan pedoman: 1 = Sangat Tidak Setuju dan 7 = Sangat Setuju.*

| No | Pertanyaan | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| B1.1 | Saya yakin saat ini akan banyak tekanan kepada perusahaan yang mengabaikan isu lingkungan | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B1.2 | Saya yakin pemerintah akan melakukan semua cara yang mungkin untuk menjaga lingkungan | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B1.3 | Saya yakin bahwa kita tidak boleh memperlambat kemajuan di bidang industri karena kepedulian terhadap lingkungan. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B1.4 | Saya yakin perlindungan terhadap lingkungan adalah tanggung jawab pemerintah, bukan warga negaranya | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B1.5 | Saya yakin bahwa peraturan pemerintah cukup mengatur perlindungan lingkungan | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B1.6 | Saya yakin setiap merek mobil "terkenal" adalah produk yang aman untuk dibeli | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B1.7 | Saya yakin bahwa kualitas mobil yang ramah lingkungan tidak sebaik produk lainnya(tidak ramah lingkungan) | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B1.8 | Saya yakin perusahaan di Indonesia umumnya memiliki kesadaran yang baik dalam membantu menjaga lingkungan | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B1.9 | Saya yakin perusahaan menempatkan prioritas yang lebih tinggi dalam mengurangi polusi daripada meningkatkan profitabilitas perusahaan. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B1.10 | Saya yakin perusahaan menempatkan prioritas yang lebih tinggi dalam mengurangi polusi daripada meningkatkan profitabilitas perusahaan, walaupun hal itu sangat beresiko | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## BAGIAN 2

**Petunjuk:** *berilah tanda silang(x) pada huruf yang paling sesuai dengan penilaian Anda terhadap masing-masing pernyataan berikut ini, dengan pedoman: 1 = Sangat Tidak Setuju dan 7 = Sangat Setuju.*

| NO | Pertanyaan | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| B2.1 | Rakyat Indonesia seharusnya membeli produk buatan Indonesia dan bukan produk impor | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.2 | Hanya produk-produk yang tidak tersedia di Indonesia yang seharusnya diimpor. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.3 | Membeli produk buatan Indonesia. Menjaga ekonomi Indonesia tetap bertumbuh | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.4 | Produk Indonesia adalah yang pertama, terakhir dan yang terutama | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.5 | Membeli produk buatan luar negeri artinya bukan orang Indonesia sejati | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.6 | Merupakan tindakan yang tidak tepat jika membeli produk asing, karena akan membuat orang Indonesia lainnya kehilangan pekerjaannya | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.7 | Orang Indonesia sejati seharusnya membeli produk buatan Indonesia | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.8 | Kita harus membeli produk buatan Indonesia bukannya membiarkan negara-negara lain menjadi kaya karena kita. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.9 | Membeli produk buatan Indonesia adalah pilihan terbaik | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.10 | Seharusnya ada pembatasan perdagangan produk buatan luar negeri atau pembatasan pembelian produk buatan luar negeri kecuali karena kebutuhan mendesak | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.11 | Orang Indonesia seharusnya tidak membeli produk buatan asing, karena akan melukai bisnis dalam negeri dan menyebabkan pengangguran | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.12 | Kontrol yang ketat harus dilakukan kepada semua produk impor | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.13 | Mungkin dengan pembelian produk buatan Indonesia akan membebankan biaya jangka panjang, tetapi saya lebih suka untuk mendukung produk Indonesia. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.14 | Orang asing seharusnya tidak diperbolehkan untuk menempatkan produk mereka di pasar domestik | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.15 | Produk asing harusnya dibebankan pajak yang besar untuk mengurangi masuknya produk mereka ke Indonesia | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.16 | Kita seharusnya membeli produk luar negeri hanya jika kita tidak mendapatkan produk tersebut di negeri kita sendiri. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B2.17 | Konsumen Indonesia yang membeli produk yang dibuat di negara lain bertanggung jawab kepada rekan mereka yang menjadi kehilangan pekerjaan akibat minimnya konsumsi produk buatan dalam negeri. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

## BAGIAN 3

**Petunjuk:** *berilah tanda silang(x) pada huruf yang paling sesuai dengan penilaian Anda terhadap masing-masing pernyataan berikut ini, dengan pedoman: 1 = Sangat Tidak Setuju dan 7 = Sangat Setuju.*

| No | Pernyataan | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|
| B3.1 | Saya tidak melihat dampak polusi kendaraan dalam kehidupan sehari-hari saya | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.2 | Merupakan hal yang percuma jika seseorang mengendarai mobil dengan emisi rendah | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.3 | Jika masalah lingkungan saat ini belum teratasi, itu tidak berpengaruh pada jenis mobil yang akan saya beli (baik tinggi/rendah tingkat emisi) | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.4 | *Jika saya membeli MOBNAS ramah lingkungan* | Kebanyakan orang akan setuju | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.5 | | Kebanyakan orang akan menginginkannya | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.6 | *Jika saya membeli MOBNAS ramah lingkungan* | Orang-orang yang penting dalam hidup saya tidak mendukungnya | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.7 | *Mengunakan MOBNAS ramah lingkungan* | Akan berdampak negatif pada citra saya | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.8 | | Mengambarkan sisi positif diri saya | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.9 | | Mengambarkan apa yang saya yakini | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.10 | Saya tertarik untuk membaca artikel *consumer report* (Ulasan konsumen) pada produk ramah lingkungan | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.11 | Saya selalu membaca label pada produk ramah lingkungan dan mencermati bahan-bahan yang terkandung | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.12 | Saya sadar akan dampak lingkungan dari produk yang saya konsumsi | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.13 | Saya tahu dampak polusi dari produk yang saya gunakan | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.14 | Saya berniat untuk membeli MOBNAS ramah lingkungan tahun depan | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.15 | Saya berencana untuk membeli MOBNAS ramah lingkungan tujuh tahun mendatang | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| B3.16 | Ketika anda memutuskan untuk membeli/mengganti mobil yang ada saat ini, maukah kamu menggunakan MOBNAS ramah lingkungan? | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |



**-SELESAI-**

| Koesioner | umur | JenisKelamin | Tingkatpendidikan | Pekerjaan | Komunitas | B1.1 |
|---|---|---|---|---|---|---|
| KH010 | 20 | 1 | 2 | 1 | VOSTRO C | 6 |
| KH011 | 19 | 1 | 2 | 1 | VOSTRO C | 1 |
| KH012 | 27 | 1 | 3 | 4 | VOSTRO C | 1 |
| KH013 | 31 | 1 | 3 | 4 | VOSTRO C | 1 |
| KH014 | 28 | 1 | 3 | 4 | VOSTRO C | 1 |
| KH015 | 24 | 1 | 3 | 1 | VOSTRO C | 7 |
| KH016 | 21 | 2 | 2 | 1 | VOSTRO C | 6 |
| KH017 | 24 | 1 | 2 | 1 | VOSTRO C | 6 |
| KH018 | 26 | 2 | 3 | 1 | VOSTRO C | 7 |
| KH019 | 19 | 2 | 2 | 1 | VOSTRO C | 7 |
| KH021 | 35 | 1 | 3 | 2 | MAZDA JOGJA | 4 |
| KH022 | 27 | 1 | 1 | 6 | NA | 1 |
| KH023 | 26 | 2 | 3 | 2 | HCI | 6 |
| KH024 | 22 | 1 | 2 | 2 | EGO | 6 |
| KH025 | 29 | 1 | 3 | 2 | EGO | 6 |
| KH026 | 28 | 1 | 3 | 3 | EGO | 6 |
| KH027 | 22 | 1 | 2 | 1 | EGO | 6 |
| KH028 | 32 | 1 | 3 | 2 | EGO | 6 |
| KH029 | 21 | 1 | 2 | 1 | EGO | 7 |
| KH030 | 21 | 1 | 2 | 1 | EGO | 6 |
| KH031 | 20 | 1 | 2 | 1 | EGO | 6 |
| KH032 | 20 | 1 | 2 | 1 | HEC | 6 |
| KH033 | 18 | 1 | 2 | 1 | EGO | 6 |
| KH034 | 29 | 1 | 2 | 2 | EGO | 1 |
| KH035 | 23 | 1 | 2 | 1 | EGO | 6 |
| KH036 | 28 | 1 | 3 | 3 | EGO | 6 |
| KH037 | 28 | 1 | 4 | 3 | EGO | 6 |
| KH038 | 19 | 1 | 2 | 1 | EGO | 6 |
| KH039 | 21 | 1 | 2 | 1 | EGO | 6 |
| KH040 | 22 | 1 | 2 | 1 | ES SQUARD | 6 |
| KH041 | 26 | 1 | 3 | 3 | EGO | 6 |
| KH042 | 25 | 1 | 3 | 2 | EGO | 6 |
| KH043 | 24 | 1 | 3 | 4 | EGO | 6 |
| KH044 | 32 | 1 | 2 | 6 | NA | 4 |
| KH045 | 27 | 1 | 2 | 2 | NA | 7 |
| KH046 | 26 | 1 | 2 | 2 | NA | 4 |
| KH047 | 30 | 1 | 3 | 2 | IDMOC | 6 |
| KH048 | 32 | 1 | 3 | 2 | JFC | 5 |
| KH049 | 24 | 1 | 3 | 6 | FREEDOM | 6 |
| KH053 | 23 | 1 | 2 | 6 | NA | 7 |
| KH054 | 41 | 1 | 3 | 4 | NA | 4 |
| KH055 | 30 | 1 | 2 | 2 | NA | 6 |
| KH056 | 22 | 1 | 2 | 1 | HMTA4 | 4 |
| KH057 | 23 | 2 | 3 | 6 | NA | 5 |
| KH058 | 23 | 1 | 3 | 1 | OMLETZ COMM | 4 |
| KH060 | 22 | 1 | 2 | 1 | 234SC | 5 |
| KH061 | 22 | 1 | 2 | 1 | Civic FERIO | 1 |
| KH065 | 17 | 1 | 2 | 1 | MOCCA | 4 |
| KH066 | 18 | 1 | 2 | 1 | MOCCA | 4 |

| | | | | | | |
|---|---|---|---|---|---|---|
| KH067 | 20 | 2 | 3 | 1 | MOCCA | 4 |
| KH068 | 17 | 1 | 3 | 1 | MOCCA | 4 |
| KH069 | 19 | 1 | 2 | 1 | PRODRIVE S7 | 5 |
| KH070 | 28 | 1 | 3 | 4 | KUD | 4 |
| KH071 | 27 | 1 | 3 | 4 | KUD | 1 |
| KH072 | 24 | 1 | 3 | 6 | KUD | 5 |
| KH073 | 24 | 1 | 2 | 1 | 234SC | 4 |
| KH074 | 24 | 1 | 2 | 1 | 234SC | 1 |
| KH075 | 20 | 1 | 2 | 1 | 234SC | 2 |
| KH076 | 21 | 1 | 2 | 1 | 234SC | 1 |
| KH077 | 23 | 2 | 2 | 1 | 234SC | 5 |
| KH078 | 30 | 1 | 3 | 4 | RELOAD | 5 |
| KH079 | 40 | 1 | 3 | 2 | SQUARD | 5 |
| KH080 | 24 | 1 | 3 | 4 | RELOAD | 6 |
| KH081 | 24 | 2 | 3 | 6 | TYCI | 7 |
| KH092 | 22 | 1 | 3 | 6 | Civic FERIO | 1 |
| KH093 | 23 | 1 | 2 | 1 | LDMOC | 6 |
| KH094 | 29 | 1 | 3 | 2 | Civic FERIO | 4 |
| KH095 | 30 | 1 | 3 | 2 | Civic FERIO | 3 |
| KH096 | 25 | 1 | 2 | 1 | Civic FERIO | 4 |
| KH097 | 28 | 1 | 3 | 2 | Civic FERIO | 4 |
| KH098 | 23 | 1 | 2 | 2 | Civic FERIO | 7 |
| KH099 | 21 | 1 | 2 | 1 | Civic FERIO | 5 |
| KH100 | 23 | 1 | 2 | 1 | Civic FERIO | 4 |
| KH101 | 24 | 1 | 2 | 1 | Civic FERIO | 4 |
| KH102 | 23 | 1 | 3 | 2 | KOMPOY | 7 |
| KH103 | 21 | 1 | 2 | 1 | Civic FERIO | 1 |
| KH104 | 23 | 1 | 2 | 1 | Civic FERIO | 5 |
| KH105 | 20 | 1 | 2 | 1 | Civic FERIO | 4 |
| KH106 | 17 | 1 | 3 | 4 | Civic FERIO | 3 |
| KH107 | 22 | 1 | 3 | 4 | Civic FERIO | 4 |
| KH108 | 21 | 1 | 3 | 1 | Civic FERIO | 3 |
| KH109 | 27 | 1 | 2 | 2 | NA | 6 |
| KH110 | 28 | 1 | 3 | 2 | UK | 7 |
| KH111 | 29 | 2 | 2 | 2 | NA | 4 |
| KH112 | 31 | 1 | 2 | 2 | NA | 4 |
| KH113 | 25 | 1 | 2 | 1 | 234SC | 1 |
| KH114 | 22 | 1 | 3 | 1 | AERIO INDON | 2 |
| KH116 | 23 | 2 | 4 | 4 | NA | 2 |
| KH117 | 35 | 1 | 3 | 2 | NA | 1 |
| KH118 | 39 | 1 | 3 | 2 | NA | 5 |
| KH119 | 26 | 1 | 3 | 4 | NA | 6 |
| KH120 | 26 | 1 | 3 | 2 | NA | 7 |
| KH121 | 25 | 1 | 4 | 2 | NA | 7 |
| KH122 | 18 | 1 | 2 | 1 | ORIGINAL EI | 4 |
| KH123 | 44 | 1 | 4 | 4 | HATNI | 5 |
| KH124 | 21 | 1 | 2 | 2 | NA | 6 |
| KH125 | 43 | 1 | 2 | 2 | NA | 4 |
| KH126 | 21 | 1 | 3 | 4 | MORFINE | 6 |
| KH127 | 23 | 1 | 2 | 1 | MORFINE | 6 |

| KH128 | 23 | 1 | 3 | 3 | MORFINE | 4 |
|-------|----|---|---|---|---------|---|
| KH129 | 23 | 1 | 3 | 4 | MORFINE | 5 |
| KH130 | 30 | 2 | 3 | 2 | CMR | 5 |
| KH131 | 38 | 1 | 4 | 2 | TROPER INDO | 3 |
| KH132 | 25 | 1 | 2 | 1 | KCAC | 5 |
| KH133 | 20 | 1 | 2 | 1 | KCAC | 7 |
| KH134 | 27 | 1 | 3 | 2 | KCAC | 7 |
| KH135 | 31 | 1 | 4 | 4 | KCAC | 7 |
| KH136 | 23 | 1 | 3 | 2 | KCAC | 7 |
| KH137 | 24 | 1 | 3 | 1 | 4WD SEMARAN | 3 |
| KH138 | 20 | 2 | 3 | 1 | SKF | 6 |
| KH139 | 23 | 1 | 2 | 1 | MYC | 4 |
| KH140 | 23 | 1 | 3 | 1 | MYC | 6 |
| KH142 | 20 | 1 | 3 | 1 | ORIGINAL EI | 3 |
| KH143 | 24 | 2 | 3 | 1 | NA | 6 |
| KH144 | 23 | 1 | 3 | 3 | NA | 7 |
| KH145 | 17 | 1 | 2 | 1 | ORIGINAL EI | 5 |
| KH146 | 43 | 1 | 3 | 3 | FORESTER | 7 |
| KH149 | 23 | 1 | 2 | 1 | MYC | 6 |
| KH158 | 22 | 2 | 2 | 1 | KCAC | 5 |
| KH159 | 24 | 1 | 3 | 2 | KCAC | 5 |
| KH160 | 23 | 1 | 2 | 1 | KCAC | 6 |
| KH165 | 25 | 2 | 3 | 2 | KCAC | 5 |
| KH166 | 31 | 1 | 3 | 4 | NA | 5 |
| KH167 | 37 | 2 | 2 | 2 | NA | 7 |
| KH168 | 30 | 2 | 3 | 2 | NA | 7 |
| KH169 | 21 | 1 | 3 | 1 | NA | 4 |
| KH170 | 26 | 1 | 3 | 2 | CIVIC FERIO | 6 |
| KH171 | 22 | 1 | 2 | 1 | BM | 5 |
| KH172 | 21 | 1 | 2 | 1 | FS | 6 |
| KH173 | 21 | 1 | 2 | 1 | PAP | 5 |
| KH174 | 44 | 1 | 2 | 4 | HMO | 5 |
| KH175 | 22 | 1 | 2 | 1 | HMO | 5 |
| KH176 | 20 | 2 | 2 | 1 | HMO | 5 |
| KH177 | 27 | 2 | 3 | 2 | GO | 5 |
| KH178 | 22 | 1 | 2 | 1 | KCAC | 6 |
| KH179 | 22 | 1 | 2 | 1 | KCAC | 6 |
| KH180 | 23 | 1 | 2 | 1 | KCAC | 6 |
| KH181 | 21 | 1 | 2 | 3 | BENDERA C | 6 |
| KH182 | 24 | 2 | 3 | 2 | BENDERA C | 6 |
| KH183 | 30 | 2 | 3 | 2 | BENDERA C | 7 |
| KH184 | 28 | 1 | 3 | 6 | BENDERA C | 3 |
| KH185 | 29 | 1 | 3 | 2 | BENDERA C | 6 |
| KH186 | 28 | 1 | 3 | 2 | BENDERA C | 5 |
| KH187 | 32 | 1 | 3 | 2 | BENDERA C | 7 |
| KH188 | 30 | 1 | 3 | 2 | BENDERA C | 7 |
| KH189 | 29 | 1 | 3 | 2 | BLACK CAR C | 7 |
| KH190 | 21 | 1 | 2 | 1 | LAREANGON | 5 |
| KH191 | 28 | 1 | 2 | 3 | NN | 5 |
| KH192 | 27 | 1 | 3 | 2 | GUEZZWHO? | 6 |

| KH193 | 40 | 2 | 3 | 4 | NN | 5 |
| --- | --- | --- | --- | --- | --- | --- |
| KH194 | 25 | 1 | 3 | 2 | GUEZZWHO? | 6 |
| KH195 | 45 | 2 | 4 | 3 | NN | 6 |
| KH196 | 55 | 1 | 3 | 3 | NN | 5 |
| KH197 | 30 | 1 | 3 | 6 | GUEZZWHO? | 7 |
| KH198 | 23 | 1 | 3 | 4 | GUEZZWHO? | 6 |
| KH199 | 55 | 1 | 3 | 3 | NN | 4 |
| KH200 | 23 | 1 | 3 | 1 | NN | 6 |
| KH201 | 22 | 1 | 3 | 1 | NUKUS C | 3 |

| B1.2 | B1.3 | B1.4 | B1.5 | B1.6 | B1.7 | B1.8 | B1.9 | B1.10 |
|---|---|---|---|---|---|---|---|---|
| 6 | 7 | 5 | 5 | 6 | 5 | 6 | 5 | 5 |
| 3 | 1 | 1 | 2 | 3 | 2 | 1 | 2 | 1 |
| 3 | 1 | 1 | 2 | 3 | 3 | 2 | 1 | 2 |
| 3 | 1 | 1 | 2 | 1 | 3 | 3 | 1 | 2 |
| 2 | 1 | 3 | 2 | 1 | 2 | 1 | 2 | 2 |
| 3 | 6 | 1 | 4 | 4 | 4 | 4 | 3 | 4 |
| 6 | 6 | 7 | 6 | 2 | 7 | 5 | 7 | 5 |
| 7 | 6 | 5 | 6 | 2 | 5 | 6 | 7 | 6 |
| 3 | 7 | 1 | 4 | 4 | 4 | 4 | 2 | 3 |
| 3 | 7 | 1 | 4 | 4 | 4 | 4 | 3 | 4 |
| 4 | 6 | 2 | 5 | 6 | 1 | 4 | 1 | 1 |
| 7 | 7 | 7 | 7 | 7 | 1 | 7 | 7 | 7 |
| 7 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 7 |
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| 7 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 7 |
| 7 | 7 | 5 | 6 | 7 | 6 | 6 | 7 | 7 |
| 7 | 4 | 6 | 5 | 7 | 7 | 7 | 7 | 7 |
| 7 | 6 | 5 | 6 | 6 | 5 | 7 | 7 | 7 |
| 5 | 6 | 6 | 7 | 6 | 7 | 5 | 7 | 7 |
| 5 | 7 | 7 | 6 | 7 | 6 | 6 | 5 | 7 |
| 7 | 6 | 6 | 7 | 7 | 5 | 6 | 6 | 7 |
| 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 4 | 6 | 5 | 7 | 7 | 7 | 5 | 7 |
| 1 | 1 | 7 | 7 | 1 | 1 | 5 | 6 | 7 |
| 7 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 7 |
| 7 | 7 | 5 | 6 | 7 | 6 | 6 | 7 | 7 |
| 7 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 7 |
| 6 | 5 | 7 | 7 | 6 | 7 | 6 | 7 | 7 |
| 7 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 7 |
| 7 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 7 |
| 6 | 5 | 7 | 7 | 6 | 7 | 6 | 7 | 7 |
| 7 | 5 | 4 | 5 | 5 | 5 | 6 | 5 | 5 |
| 7 | 5 | 6 | 7 | 6 | 6 | 7 | 7 | 7 |
| 7 | 7 | 1 | 3 | 3 | 2 | 7 | 5 | 5 |
| 7 | 7 | 1 | 4 | 1 | 1 | 2 | 5 | 5 |
| 3 | 6 | 5 | 5 | 4 | 4 | 1 | 2 | 2 |
| 6 | 6 | 7 | 5 | 6 | 5 | 6 | 6 | 6 |
| 5 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 6 |
| 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 |
| 4 | 7 | 2 | 6 | 6 | 7 | 5 | 5 | 5 |
| 6 | 4 | 3 | 6 | 6 | 7 | 6 | 6 | 6 |
| 6 | 6 | 1 | 5 | 6 | 2 | 6 | 4 | 4 |
| 3 | 5 | 2 | 2 | 4 | 5 | 4 | 1 | 2 |
| 6 | 7 | 2 | 4 | 4 | 3 | 5 | 3 | 3 |
| 3 | 5 | 2 | 2 | 4 | 5 | 4 | 1 | 3 |
| 5 | 5 | 6 | 6 | 5 | 5 | 7 | 6 | 5 |
| 7 | 7 | 1 | 1 | 7 | 7 | 1 | 4 | 4 |
| 4 | 1 | 7 | 7 | 1 | 2 | 1 | 1 | 2 |
| 5 | 5 | 1 | 4 | 5 | 2 | 5 | 4 | 4 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 5 | 5 | 1 | 4 | 5 | 2 | 5 | 4 | 4 |
| 5 | 5 | 1 | 4 | 5 | 2 | 5 | 4 | 4 |
| 4 | 2 | 1 | 2 | 3 | 4 | 4 | 4 | 4 |
| 7 | 1 | 1 | 3 | 5 | 2 | 5 | 2 | 4 |
| 3 | 2 | 1 | 2 | 4 | 1 | 1 | 2 | 4 |
| 3 | 5 | 6 | 6 | 6 | 6 | 3 | 6 | 3 |
| 4 | 5 | 5 | 5 | 6 | 7 | 7 | 7 | 7 |
| 2 | 1 | 3 | 1 | 2 | 2 | 1 | 2 | 1 |
| 2 | 4 | 5 | 6 | 6 | 6 | 5 | 5 | 5 |
| 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 |
| 5 | 5 | 6 | 6 | 6 | 6 | 6 | 5 | 5 |
| 5 | 7 | 1 | 4 | 7 | 1 | 7 | 7 | 7 |
| 7 | 6 | 6 | 7 | 7 | 6 | 5 | 6 | 6 |
| 7 | 5 | 6 | 6 | 7 | 7 | 6 | 5 | 7 |
| 4 | 7 | 1 | 4 | 5 | 1 | 5 | 5 | 4 |
| 4 | 7 | 1 | 4 | 4 | 4 | 4 | 1 | 1 |
| 7 | 6 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| 4 | 4 | 1 | 2 | 4 | 4 | 4 | 3 | 3 |
| 5 | 5 | 1 | 2 | 2 | 2 | 3 | 2 | 2 |
| 7 | 5 | 1 | 4 | 4 | 4 | 4 | 3 | 3 |
| 5 | 4 | 4 | 3 | 4 | 4 | 6 | 5 | 4 |
| 6 | 5 | 6 | 6 | 5 | 5 | 6 | 6 | 6 |
| 2 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1 | 7 | 1 | 1 | 1 | 1 | 1 | 1 | 7 |
| 4 | 5 | 1 | 2 | 6 | 7 | 2 | 3 | 6 |
| 5 | 5 | 3 | 5 | 6 | 7 | 6 | 6 | 5 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 6 | 5 | 1 | 2 | 3 | 4 | 4 | 1 | 2 |
| 3 | 5 | 4 | 3 | 5 | 6 | 6 | 4 | 4 |
| 4 | 5 | 3 | 4 | 5 | 4 | 3 | 4 | 3 |
| 5 | 6 | 1 | 4 | 4 | 1 | 3 | 3 | 4 |
| 5 | 7 | 1 | 2 | 6 | 5 | 3 | 4 | 5 |
| 6 | 6 | 2 | 3 | 1 | 2 | 6 | 6 | 6 |
| 2 | 3 | 7 | 3 | 5 | 4 | 2 | 2 | 2 |
| 3 | 1 | 1 | 5 | 1 | 2 | 1 | 3 | 1 |
| 6 | 6 | 2 | 3 | 7 | 2 | 5 | 2 | 2 |
| 2 | 4 | 1 | 2 | 2 | 5 | 4 | 2 | 2 |
| 1 | 6 | 6 | 1 | 7 | 4 | 1 | 1 | 1 |
| 2 | 6 | 5 | 3 | 4 | 4 | 3 | 3 | 3 |
| 6 | 6 | 1 | 5 | 3 | 4 | 6 | 6 | 6 |
| 2 | 7 | 1 | 1 | 6 | 2 | 6 | 2 | 3 |
| 4 | 6 | 1 | 2 | 4 | 3 | 4 | 2 | 2 |
| 7 | 7 | 3 | 4 | 4 | 5 | 4 | 4 | 4 |
| 5 | 4 | 1 | 7 | 5 | 5 | 3 | 4 | 4 |
| 4 | 5 | 1 | 3 | 5 | 2 | 4 | 4 | 4 |
| 3 | 6 | 7 | 7 | 7 | 4 | 4 | 5 | 3 |
| 6 | 4 | 1 | 4 | 6 | 4 | 4 | 4 | 4 |
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| B2.1 | B2.2 | B2.3 | B2.4 | B2.5 | B2.6 | B2.7 | B2.8 | B2.9 |
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| B2.10 | B2.11 | B2.12 | B2.13 | B2.14 | B2.15 | B2.16 | B2.17 | B3.1 |
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| 5 | 6 | 4 | 4 | 6 | 5 | 5 | 5 | 6 |
| 5 | 3 | 6 | 6 | 4 | 3 | 5 | 5 | 7 |
| 3 | 4 | 5 | 4 | 5 | 4 | 5 | 5 | 1 |
| 3 | 4 | 4 | 4 | 4 | 5 | 4 | 4 | 6 |
| 7 | 4 | 5 | 4 | 4 | 6 | 6 | 2 | 7 |
| 7 | 7 | 6 | 5 | 4 | 5 | 5 | 3 | 1 |

| B3.2 | B3.3 | B3.4 | B3.5 | B3.6 | B3.7 | B3.8 | B3.9 | B3.10 |
|---|---|---|---|---|---|---|---|---|
| 7 | 2 | 6 | 7 | 3 | 3 | 5 | 6 | 6 |
| 7 | 6 | 4 | 2 | 7 | 4 | 5 | 3 | 3 |
| 7 | 5 | 1 | 1 | 3 | 1 | 1 | 1 | 3 |
| 7 | 5 | 1 | 1 | 3 | 7 | 2 | 1 | 3 |
| 7 | 5 | 1 | 1 | 3 | 6 | 1 | 3 | 1 |
| 7 | 4 | 4 | 4 | 6 | 6 | 5 | 4 | 4 |
| 5 | 4 | 4 | 4 | 3 | 4 | 5 | 3 | 5 |
| 5 | 5 | 4 | 4 | 4 | 3 | 6 | 5 | 6 |
| 7 | 4 | 5 | 5 | 6 | 6 | 5 | 4 | 5 |
| 7 | 5 | 5 | 5 | 6 | 6 | 5 | 4 | 5 |
| 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 1 | 1 | 1 | 1 | 7 | 7 | 7 | 1 |
| 7 | 7 | 7 | 7 | 7 | 7 | 5 | 4 | 5 |
| 7 | 7 | 7 | 7 | 7 | 7 | 5 | 4 | 5 |
| 7 | 7 | 7 | 7 | 7 | 7 | 5 | 4 | 5 |
| 6 | 6 | 6 | 6 | 7 | 7 | 4 | 6 | 5 |
| 7 | 7 | 7 | 5 | 7 | 7 | 5 | 6 | 5 |
| 7 | 7 | 7 | 5 | 7 | 7 | 4 | 5 | 5 |
| 7 | 7 | 3 | 7 | 4 | 7 | 4 | 4 | 5 |
| 7 | 7 | 7 | 5 | 7 | 7 | 5 | 5 | 6 |
| 7 | 7 | 6 | 7 | 7 | 7 | 4 | 5 | 5 |
| 4 | 2 | 5 | 4 | 7 | 7 | 5 | 5 | 4 |
| 7 | 7 | 6 | 6 | 7 | 7 | 5 | 5 | 5 |
| 7 | 7 | 7 | 7 | 7 | 7 | 5 | 4 | 5 |
| 7 | 7 | 7 | 7 | 7 | 7 | 5 | 4 | 5 |
| 6 | 6 | 6 | 6 | 7 | 7 | 3 | 4 | 5 |
| 7 | 7 | 7 | 7 | 7 | 7 | 5 | 4 | 5 |
| 6 | 7 | 7 | 7 | 7 | 7 | 4 | 4 | 5 |
| 7 | 7 | 7 | 7 | 7 | 7 | 5 | 4 | 5 |
| 7 | 7 | 7 | 7 | 7 | 7 | 5 | 4 | 5 |
| 6 | 7 | 7 | 6 | 7 | 7 | 4 | 4 | 5 |
| 7 | 7 | 4 | 1 | 7 | 4 | 3 | 5 | 4 |
| 7 | 7 | 7 | 7 | 7 | 7 | 5 | 4 | 5 |
| 2 | 1 | 7 | 7 | 3 | 7 | 7 | 7 | 7 |
| 7 | 5 | 6 | 6 | 6 | 7 | 7 | 6 | 7 |
| 7 | 7 | 4 | 4 | 4 | 3 | 4 | 4 | 5 |
| 3 | 3 | 5 | 5 | 2 | 3 | 5 | 5 | 5 |
| 2 | 2 | 6 | 6 | 2 | 1 | 7 | 7 | 5 |
| 3 | 3 | 6 | 6 | 2 | 1 | 7 | 7 | 6 |
| 4 | 3 | 6 | 6 | 5 | 4 | 6 | 6 | 5 |
| 1 | 7 | 4 | 4 | 4 | 7 | 5 | 5 | 6 |
| 6 | 4 | 4 | 4 | 6 | 3 | 5 | 3 | 5 |
| 4 | 5 | 7 | 6 | 4 | 2 | 6 | 5 | 4 |
| 6 | 3 | 5 | 5 | 6 | 6 | 5 | 5 | 6 |
| 4 | 3 | 3 | 2 | 7 | 3 | 4 | 4 | 2 |
| 3 | 3 | 5 | 5 | 2 | 2 | 2 | 3 | 3 |
| 7 | 4 | 7 | 7 | 7 | 4 | 7 | 1 | 7 |
| 4 | 4 | 7 | 7 | 7 | 7 | 7 | 7 | 4 |
| 4 | 4 | 1 | 3 | 7 | 4 | 3 | 3 | 4 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 5 | 4 | 5 | 5 | 4 | 5 | 5 | 5 | 6 |
| 4 | 4 | 1 | 3 | 7 | 4 | 3 | 3 | 4 |
| 5 | 3 | 3 | 4 | 3 | 2 | 5 | 3 | 5 |
| 5 | 4 | 2 | 3 | 4 | 4 | 4 | 4 | 5 |
| 7 | 4 | 5 | 4 | 5 | 7 | 5 | 2 | 4 |
| 2 | 2 | 3 | 3 | 3 | 5 | 5 | 5 | 4 |
| 4 | 2 | 5 | 5 | 3 | 5 | 3 | 3 | 6 |
| 7 | 6 | 3 | 1 | 6 | 7 | 2 | 1 | 1 |
| 4 | 6 | 5 | 5 | 3 | 5 | 3 | 2 | 6 |
| 7 | 6 | 1 | 2 | 5 | 7 | 2 | 1 | 2 |
| 3 | 3 | 5 | 4 | 2 | 2 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 1 | 3 | 6 | 7 | 2 | 1 | 7 | 6 | 5 |
| 2 | 1 | 7 | 7 | 2 | 7 | 5 | 6 | 5 |
| 7 | 1 | 1 | 1 | 7 | 7 | 4 | 1 | 7 |
| 6 | 1 | 6 | 6 | 7 | 7 | 4 | 4 | 4 |
| 6 | 2 | 6 | 6 | 6 | 6 | 4 | 3 | 4 |
| 7 | 3 | 6 | 6 | 6 | 7 | 6 | 6 | 6 |
| 7 | 6 | 1 | 5 | 3 | 7 | 6 | 6 | 7 |
| 7 | 6 | 6 | 6 | 6 | 7 | 6 | 6 | 6 |
| 4 | 5 | 4 | 4 | 5 | 4 | 3 | 4 | 3 |
| 3 | 3 | 5 | 5 | 2 | 2 | 6 | 6 | 5 |
| 3 | 5 | 6 | 2 | 4 | 4 | 4 | 4 | 4 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 7 | 1 | 7 | 7 | 7 | 7 | 1 | 1 | 7 |
| 6 | 1 | 6 | 2 | 7 | 6 | 6 | 2 | 2 |
| 3 | 3 | 5 | 4 | 3 | 3 | 4 | 6 | 4 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 6 | 4 | 4 | 3 | 7 | 7 | 3 | 2 | 5 |
| 5 | 3 | 4 | 3 | 4 | 4 | 4 | 4 | 5 |
| 5 | 4 | 3 | 4 | 4 | 5 | 3 | 4 | 4 |
| 7 | 4 | 6 | 6 | 1 | 7 | 6 | 5 | 7 |
| 3 | 1 | 5 | 4 | 3 | 7 | 5 | 3 | 7 |
| 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 7 | 5 | 2 | 2 | 7 | 7 | 3 | 5 | 3 |
| 7 | 5 | 1 | 2 | 7 | 5 | 3 | 1 | 2 |
| 6 | 3 | 5 | 5 | 6 | 6 | 2 | 2 | 5 |
| 5 | 5 | 4 | 4 | 6 | 5 | 5 | 4 | 4 |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 5 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 5 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 7 | 3 | 5 | 5 | 6 | 6 | 6 | 6 | 6 |
| 7 | 6 | 5 | 4 | 7 | 5 | 4 | 3 | 6 |
| 4 | 5 | 4 | 5 | 7 | 7 | 6 | 6 | 7 |
| 6 | 6 | 7 | 7 | 1 | 7 | 1 | 1 | 6 |
| 3 | 7 | 4 | 4 | 5 | 6 | 5 | 5 | 4 |
| 5 | 2 | 3 | 3 | 6 | 3 | 3 | 5 | 3 |
| 4 | 3 | 5 | 4 | 3 | 4 | 4 | 4 | 4 |
| 3 | 5 | 3 | 5 | 6 | 6 | 1 | 3 | 3 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4 | 3 | 6 | 5 | 4 | 3 | 5 | 4 | 5 |
| 4 | 4 | 5 | 4 | 4 | 4 | 4 | 5 | 4 |
| 5 | 2 | 5 | 5 | 3 | 3 | 6 | 6 | 4 |
| 3 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 5 |
| 7 | 3 | 7 | 6 | 7 | 7 | 3 | 7 | 6 |
| 7 | 4 | 6 | 5 | 7 | 7 | 1 | 7 | 6 |
| 7 | 1 | 7 | 7 | 7 | 7 | 1 | 4 | 6 |
| 7 | 2 | 6 | 7 | 7 | 7 | 5 | 6 | 7 |
| 7 | 3 | 6 | 7 | 7 | 7 | 4 | 7 | 7 |
| 2 | 2 | 6 | 6 | 1 | 1 | 7 | 7 | 6 |
| 3 | 3 | 3 | 5 | 6 | 4 | 3 | 6 | 5 |
| 3 | 2 | 4 | 5 | 5 | 3 | 6 | 6 | 2 |
| 3 | 3 | 5 | 5 | 1 | 1 | 7 | 1 | 2 |
| 2 | 2 | 6 | 5 | 3 | 4 | 5 | 4 | 5 |
| 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| 5 | 4 | 6 | 6 | 3 | 4 | 4 | 4 | 5 |
| 5 | 7 | 7 | 7 | 4 | 7 | 7 | 4 | 5 |
| 7 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | 7 |
| 1 | 2 | 2 | 2 | 6 | 5 | 3 | 3 | 6 |
| 6 | 6 | 4 | 5 | 4 | 5 | 3 | 2 | 4 |
| 3 | 3 | 6 | 6 | 2 | 2 | 5 | 5 | 5 |
| 7 | 2 | 6 | 6 | 7 | 7 | 5 | 4 | 5 |
| 7 | 7 | 7 | 7 | 7 | 7 | 5 | 1 | 5 |
| 5 | 3 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 6 | 1 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 1 | 1 | 7 | 7 | 7 | 1 | 7 | 7 | 7 |
| 5 | 7 | 6 | 6 | 2 | 4 | 4 | 4 | 4 |
| 5 | 2 | 6 | 6 | 6 | 7 | 6 | 6 | 6 |
| 6 | 6 | 5 | 6 | 6 | 6 | 5 | 5 | 6 |
| 5 | 4 | 5 | 5 | 6 | 6 | 6 | 6 | 5 |
| 6 | 6 | 6 | 4 | 5 | 3 | 5 | 5 | 5 |
| 5 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 6 | 5 | 2 | 3 | 5 | 5 | 3 | 3 | 3 |
| 4 | 3 | 3 | 3 | 5 | 5 | 2 | 3 | 2 |
| 3 | 4 | 3 | 3 | 5 | 5 | 4 | 4 | 4 |
| 7 | 3 | 5 | 6 | 7 | 7 | 4 | 5 | 4 |
| 7 | 3 | 6 | 4 | 7 | 7 | 5 | 4 | 4 |
| 7 | 3 | 6 | 5 | 7 | 7 | 4 | 4 | 5 |
| 6 | 5 | 6 | 4 | 4 | 2 | 6 | 6 | 7 |
| 6 | 7 | 7 | 6 | 7 | 7 | 1 | 7 | 7 |
| 3 | 7 | 7 | 6 | 7 | 7 | 6 | 6 | 5 |
| 2 | 4 | 7 | 6 | 4 | 2 | 5 | 6 | 3 |
| 5 | 5 | 7 | 6 | 7 | 7 | 7 | 7 | 6 |
| 6 | 5 | 6 | 5 | 4 | 4 | 4 | 5 | 6 |
| 2 | 3 | 5 | 5 | 2 | 5 | 3 | 3 | 4 |
| 5 | 3 | 7 | 6 | 7 | 7 | 6 | 5 | 6 |
| 6 | 6 | 7 | 6 | 7 | 7 | 5 | 6 | 4 |
| 4 | 5 | 6 | 6 | 7 | 7 | 6 | 6 | 6 |
| 1 | 4 | 5 | 5 | 3 | 3 | 5 | 5 | 5 |
| 6 | 6 | 2 | 3 | 5 | 4 | 5 | 2 | 2 |

| | | | | | | | | |
|---:|---:|---:|---:|---:|---:|---:|---:|---:|
| 4 | 4 | 2 | 2 | 6 | 6 | 2 | 2 | 5 |
| 4 | 4 | 2 | 3 | 4 | 2 | 6 | 6 | 4 |
| 6 | 6 | 2 | 4 | 4 | 3 | 1 | 3 | 5 |
| 6 | 4 | 4 | 5 | 3 | 3 | 3 | 4 | 5 |
| 3 | 4 | 4 | 3 | 5 | 3 | 5 | 5 | 6 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 4 | 4 | 4 | 4 | 3 | 4 | 4 | 5 | 4 |
| 4 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 4 |
| 2 | 2 | 5 | 5 | 5 | 6 | 3 | 1 | 5 |

| B3.11 | B3.12 | B3.13 | B3.14 | B3.15 | B3.16 |
|---|---|---|---|---|---|
| 4 | 4 | 4 | 3 | 3 | 4 |
| 2 | 4 | 2 | 1 | 1 | 1 |
| 6 | 3 | 2 | 1 | 5 | 1 |
| 1 | 2 | 3 | 1 | 2 | 5 |
| 2 | 4 | 1 | 2 | 1 | 2 |
| 4 | 4 | 4 | 3 | 4 | 4 |
| 5 | 7 | 4 | 5 | 3 | 5 |
| 5 | 7 | 5 | 6 | 5 | 6 |
| 4 | 4 | 5 | 4 | 4 | 4 |
| 4 | 4 | 5 | 4 | 4 | 4 |
| 5 | 5 | 5 | 7 | 6 | 7 |
| 1 | 1 | 1 | 1 | 1 | 7 |
| 4 | 4 | 5 | 4 | 6 | 7 |
| 4 | 4 | 5 | 4 | 6 | 7 |
| 4 | 4 | 5 | 4 | 6 | 7 |
| 5 | 4 | 5 | 4 | 6 | 6 |
| 5 | 4 | 4 | 4 | 4 | 7 |
| 4 | 5 | 4 | 4 | 5 | 7 |
| 6 | 4 | 3 | 5 | 4 | 7 |
| 4 | 5 | 4 | 5 | 6 | 5 |
| 4 | 6 | 4 | 4 | 4 | 7 |
| 5 | 5 | 4 | 4 | 4 | 7 |
| 6 | 4 | 4 | 4 | 6 | 7 |
| 4 | 4 | 5 | 4 | 6 | 7 |
| 4 | 4 | 5 | 4 | 6 | 7 |
| 4 | 4 | 4 | 5 | 4 | 6 |
| 4 | 4 | 5 | 4 | 6 | 7 |
| 4 | 3 | 4 | 4 | 5 | 6 |
| 4 | 4 | 5 | 4 | 6 | 7 |
| 4 | 4 | 5 | 4 | 6 | 7 |
| 4 | 3 | 4 | 4 | 5 | 6 |
| 5 | 3 | 5 | 4 | 5 | 5 |
| 4 | 4 | 5 | 4 | 6 | 7 |
| 7 | 7 | 7 | 1 | 1 | 1 |
| 6 | 6 | 6 | 7 | 3 | 6 |
| 7 | 7 | 7 | 7 | 7 | 7 |
| 5 | 6 | 6 | 6 | 5 | 4 |
| 5 | 6 | 7 | 6 | 6 | 5 |
| 5 | 5 | 6 | 6 | 5 | 5 |
| 4 | 5 | 5 | 4 | 4 | 5 |
| 6 | 6 | 6 | 6 | 4 | 6 |
| 5 | 6 | 6 | 5 | 3 | 7 |
| 5 | 5 | 6 | 6 | 4 | 5 |
| 5 | 6 | 6 | 4 | 5 | 6 |
| 1 | 6 | 4 | 5 | 5 | 3 |
| 5 | 5 | 5 | 4 | 4 | 4 |
| 7 | 7 | 7 | 1 | 1 | 1 |
| 4 | 7 | 7 | 7 | 4 | 7 |
| 4 | 4 | 4 | 1 | 4 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| 6 | 6 | 6 | 4 | 6 | 5 |
| 4 | 4 | 1 | 1 | 4 | 4 |
| 5 | 4 | 5 | 3 | 5 | 2 |
| 3 | 2 | 4 | 5 | 7 | 4 |
| 3 | 4 | 7 | 4 | 4 | 5 |
| 2 | 4 | 4 | 2 | 2 | 3 |
| 5 | 6 | 6 | 5 | 5 | 5 |
| 3 | 5 | 3 | 2 | 5 | 1 |
| 6 | 5 | 5 | 5 | 4 | 5 |
| 4 | 1 | 4 | 2 | 1 | 1 |
| 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 4 | 7 | 7 |
| 6 | 6 | 7 | 7 | 6 | 6 |
| 5 | 6 | 6 | 6 | 4 | 5 |
| 7 | 4 | 7 | 1 | 1 | 1 |
| 2 | 4 | 4 | 2 | 2 | 4 |
| 2 | 5 | 5 | 3 | 4 | 4 |
| 6 | 6 | 6 | 4 | 4 | 4 |
| 7 | 7 | 7 | 5 | 5 | 5 |
| 6 | 7 | 7 | 4 | 4 | 3 |
| 4 | 3 | 3 | 3 | 4 | 4 |
| 5 | 6 | 5 | 5 | 5 | 5 |
| 4 | 4 | 4 | 4 | 4 | 4 |
| 4 | 4 | 4 | 4 | 4 | 4 |
| 4 | 4 | 4 | 4 | 4 | 4 |
| 7 | 7 | 7 | 7 | 7 | 7 |
| 6 | 6 | 6 | 2 | 6 | 6 |
| 3 | 5 | 5 | 6 | 4 | 6 |
| 4 | 4 | 4 | 4 | 4 | 4 |
| 6 | 5 | 5 | 4 | 5 | 3 |
| 5 | 5 | 5 | 4 | 4 | 4 |
| 4 | 3 | 4 | 4 | 3 | 4 |
| 5 | 5 | 5 | 4 | 5 | 7 |
| 7 | 5 | 7 | 5 | 6 | 6 |
| 7 | 7 | 7 | 5 | 5 | 7 |
| 4 | 4 | 4 | 1 | 1 | 3 |
| 1 | 5 | 3 | 6 | 3 | 1 |
| 5 | 6 | 6 | 4 | 5 | 5 |
| 6 | 6 | 6 | 1 | 1 | 2 |
| 7 | 7 | 7 | 4 | 7 | 7 |
| 4 | 4 | 4 | 1 | 1 | 4 |
| 5 | 5 | 5 | 4 | 4 | 4 |
| 6 | 6 | 6 | 2 | 6 | 5 |
| 3 | 7 | 7 | 4 | 5 | 5 |
| 3 | 5 | 5 | 3 | 3 | 3 |
| 6 | 6 | 6 | 3 | 6 | 6 |
| 5 | 5 | 5 | 3 | 4 | 4 |
| 4 | 5 | 7 | 4 | 4 | 4 |
| 5 | 4 | 4 | 5 | 5 | 6 |
| 5 | 3 | 3 | 2 | 6 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| 6 | 5 | 4 | 5 | 6 | 5 |
| 4 | 5 | 5 | 4 | 4 | 4 |
| 3 | 5 | 5 | 4 | 6 | 3 |
| 5 | 6 | 5 | 5 | 5 | 6 |
| 7 | 5 | 6 | 7 | 3 | 7 |
| 7 | 7 | 6 | 6 | 7 | 7 |
| 5 | 7 | 7 | 7 | 5 | 5 |
| 6 | 5 | 6 | 7 | 5 | 6 |
| | 5 | 6 | 6 | 7 | 7 | 6 |
| | 5 | 5 | 6 | 5 | 3 | 4 |
| | 3 | 7 | 6 | 6 | 6 | 3 |
| | 3 | 3 | 5 | 5 | 4 | 5 |
| | 2 | 3 | 4 | 4 | 4 | 5 |
| | 3 | 7 | 7 | 3 | 2 | 1 |
| | 5 | 5 | 5 | 4 | 4 | 4 |
| | 5 | 5 | 4 | 5 | 4 | 5 |
| | 6 | 6 | 4 | 1 | 1 | 1 |
| | 7 | 7 | 4 | 4 | 7 | 7 |
| | 6 | 6 | 6 | 6 | 6 | 6 |
| | 4 | 5 | 5 | 5 | 3 | 6 |
| | 3 | 3 | 5 | 5 | 2 | 3 |
| | 6 | 5 | 5 | 6 | 6 | 5 |
| | 5 | 7 | 7 | 6 | 6 | 6 |
| | 7 | 7 | 7 | 5 | 6 | 6 |
| | 7 | 7 | 7 | 2 | 2 | 2 |
| | 7 | 7 | 7 | 7 | 7 | 7 |
| | 4 | 5 | 5 | 2 | 2 | 4 |
| | 6 | 6 | 6 | 6 | 6 | 7 |
| | 5 | 6 | 6 | 6 | 5 | 6 |
| | 4 | 6 | 3 | 4 | 5 | 5 |
| | 5 | 4 | 4 | 4 | 5 | 2 |
| | 4 | 4 | 4 | 4 | 4 | 2 |
| | 3 | 3 | 2 | 3 | 4 | 2 |
| | 2 | 3 | 3 | 21 | 2 | 3 |
| | 4 | 3 | 4 | 3 | 3 | 3 |
| | 5 | 4 | 4 | 4 | 5 | 6 |
| | 5 | 5 | 5 | 4 | 5 | 6 |
| | 4 | 6 | 5 | 4 | 5 | 7 |
| | 7 | 6 | 3 | 3 | 3 | 4 |
| | 5 | 6 | 5 | 6 | 5 | 7 |
| | 6 | 7 | 6 | 1 | 5 | 6 |
| | 2 | 3 | 3 | 4 | 4 | 4 |
| | 5 | 5 | 6 | 7 | 7 | 7 |
| | 7 | 7 | 5 | 5 | 2 | 4 |
| | 4 | 5 | 7 | 7 | 7 | 7 |
| | 5 | 6 | 6 | 6 | 5 | 6 |
| | 5 | 4 | 5 | 4 | 6 | 6 |
| | 6 | 5 | 5 | 4 | 5 | 5 |
| | 5 | 5 | 4 | 4 | 5 | 5 |
| | 4 | 4 | 5 | 5 | 6 | 2 |

| | | | | | |
|---|---|---|---|---|---|
| 5 | 5 | 5 | 5 | 5 | 5 |
| 4 | 3 | 3 | 6 | 6 | 6 |
| 3 | 3 | 6 | 6 | 6 | 6 |
| 4 | 5 | 5 | 3 | 3 | 5 |
| 4 | 4 | 6 | 6 | 5 | 5 |
| 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 4 | 3 | 4 | 4 | 4 |
| 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 6 | 4 | 4 | 4 | 3 |

# LAMPIRAN 3

**Statistics**

| | | Koesioner | umur | Jenis Kelamin | Tingkat Pendidikan | Pekerjaan |
|---|---|---|---|---|---|---|
| N | Valid | 158 | 158 | 158 | 158 | 158 |
| | Missing | 0 | 0 | 0 | 0 | 0 |
| Mean | | | 25,89 | 1,15 | 2,59 | 2,16 |
| Median | | | 24,00 | 1,00 | 3,00 | 2,00 |
| Mode | | | 23 | 1 | 3 | 1 |
| Std. Deviation | | | 6,642 | ,354 | ,588 | 1,427 |
| Variance | | | 44,122 | ,125 | ,346 | 2,036 |
| Range | | | 38 | 1 | 3 | 5 |
| Minimum | | | 17 | 1 | 1 | 1 |
| Maximum | | | 55 | 2 | 4 | 6 |
| Sum | | | 4091 | 181 | 409 | 342 |
| Percentiles | 25 | | 22,00 | 1,00 | 2,00 | 1,00 |
| | 50 | | 24,00 | 1,00 | 3,00 | 2,00 |
| | 75 | | 28,00 | 1,00 | 3,00 | 3,00 |

**Tingkat Pendidikan**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | SMP/Sederajat | 1 | ,6 | ,6 | ,6 |
| | SMA/Sederajat | 70 | 44,3 | 44,3 | 44,9 |
| | S1 | 80 | 50,6 | 50,6 | 95,6 |
| | S2 | 7 | 4,4 | 4,4 | 100,0 |
| | Total | 158 | 100,0 | 100,0 | |

**Pekerjaan**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Mahasiswa/Pelajar | 68 | 43,0 | 43,0 | 43,0 |
| | Karyawan Swasta | 47 | 29,7 | 29,7 | 72,8 |
| | Karyawan Negeri | 12 | 7,6 | 7,6 | 80,4 |
| | Wiraswasta | 21 | 13,3 | 13,3 | 93,7 |
| | Lain-lain | 10 | 6,3 | 6,3 | 100,0 |
| | Total | 158 | 100,0 | 100,0 | |

**umur**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 17 | 4 | 2,5 | 2,5 | 2,5 |
| | 18 | 3 | 1,9 | 1,9 | 4,4 |
| | 19 | 4 | 2,5 | 2,5 | 7,0 |
| | 20 | 10 | 6,3 | 6,3 | 13,3 |
| | 21 | 15 | 9,5 | 9,5 | 22,8 |
| | 22 | 15 | 9,5 | 9,5 | 32,3 |
| | 23 | 23 | 14,6 | 14,6 | 46,8 |
| | 24 | 14 | 8,9 | 8,9 | 55,7 |
| | 25 | 7 | 4,4 | 4,4 | 60,1 |
| | 26 | 7 | 4,4 | 4,4 | 64,6 |
| | 27 | 8 | 5,1 | 5,1 | 69,6 |
| | 28 | 10 | 6,3 | 6,3 | 75,9 |
| | 29 | 6 | 3,8 | 3,8 | 79,7 |
| | 30 | 9 | 5,7 | 5,7 | 85,4 |
| | 31 | 4 | 2,5 | 2,5 | 88,0 |
| | 32 | 4 | 2,5 | 2,5 | 90,5 |
| | 35 | 2 | 1,3 | 1,3 | 91,8 |
| | 37 | 1 | ,6 | ,6 | 92,4 |
| | 38 | 1 | ,6 | ,6 | 93,0 |
| | 39 | 1 | ,6 | ,6 | 93,7 |
| | 40 | 2 | 1,3 | 1,3 | 94,9 |
| | 41 | 1 | ,6 | ,6 | 95,6 |
| | 43 | 2 | 1,3 | 1,3 | 96,8 |
| | 44 | 2 | 1,3 | 1,3 | 98,1 |
| | 45 | 1 | ,6 | ,6 | 98,7 |
| | 55 | 2 | 1,3 | 1,3 | 100,0 |
| | Total | 158 | 100,0 | 100,0 | |

**Jenis Kelamin**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Laki-laki | 135 | 85,4 | 85,4 | 85,4 |
| | Perempuan | 23 | 14,6 | 14,6 | 100,0 |
| | Total | 158 | 100,0 | 100,0 | |

umur

| | |
|---|---|
| ■ | 17 |
| ■ | 18 |
| ■ | 19 |
| ■ | 20 |
| ■ | 21 |
| ■ | 22 |
| ■ | 23 |
| ■ | 24 |
| ■ | 25 |
| ■ | 26 |
| ■ | 27 |
| ■ | 28 |
| ■ | 29 |
| ■ | 30 |
| ■ | 31 |
| ■ | 32 |
| ■ | 35 |
| ■ | 37 |
| ■ | 38 |
| ■ | 39 |
| ■ | 40 |
| ■ | 41 |
| ■ | 43 |
| ■ | 44 |
| ■ | 45 |
| ■ | 55 |



Jenis Kelamin

| | |
|---|---|
| ■ | Laki-laki |
| ■ | Perempuan |

## Tingkat Pendidikan



**Legend:**
- SMP/Sederajat
- SMA/Sederajat
- S1
- S2

## Pekerjaan



**Legend:**
- Mahasiswa/Pelajar
- Karyawan Swasta
- Karyawan Negeri
- Wiraswasta
- Lain-lain
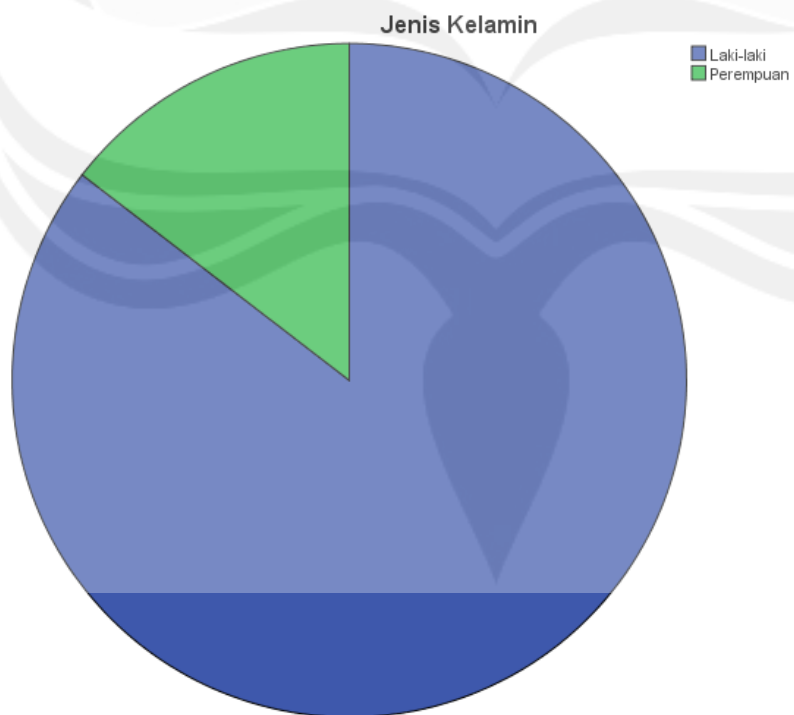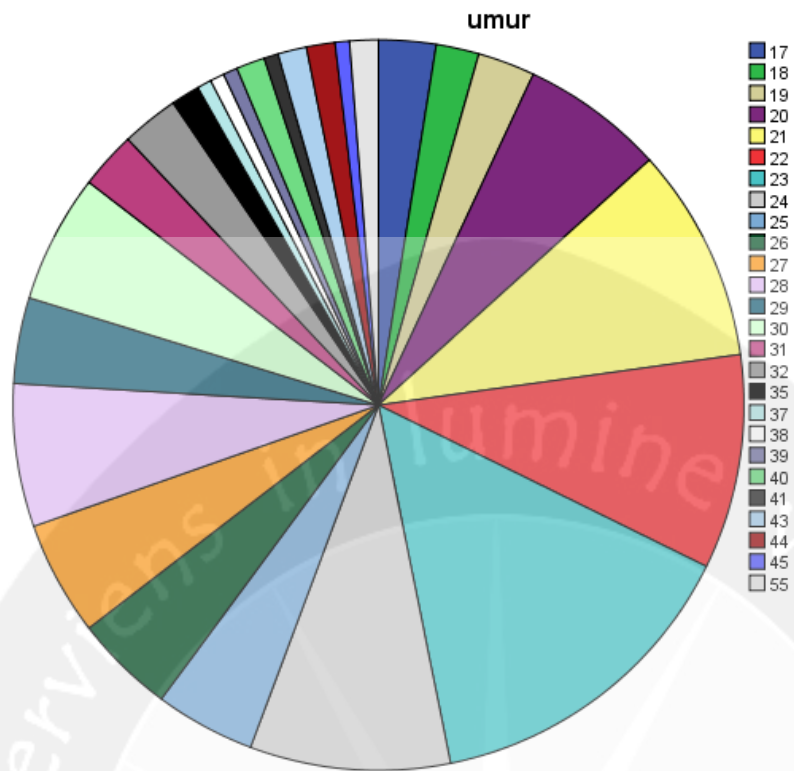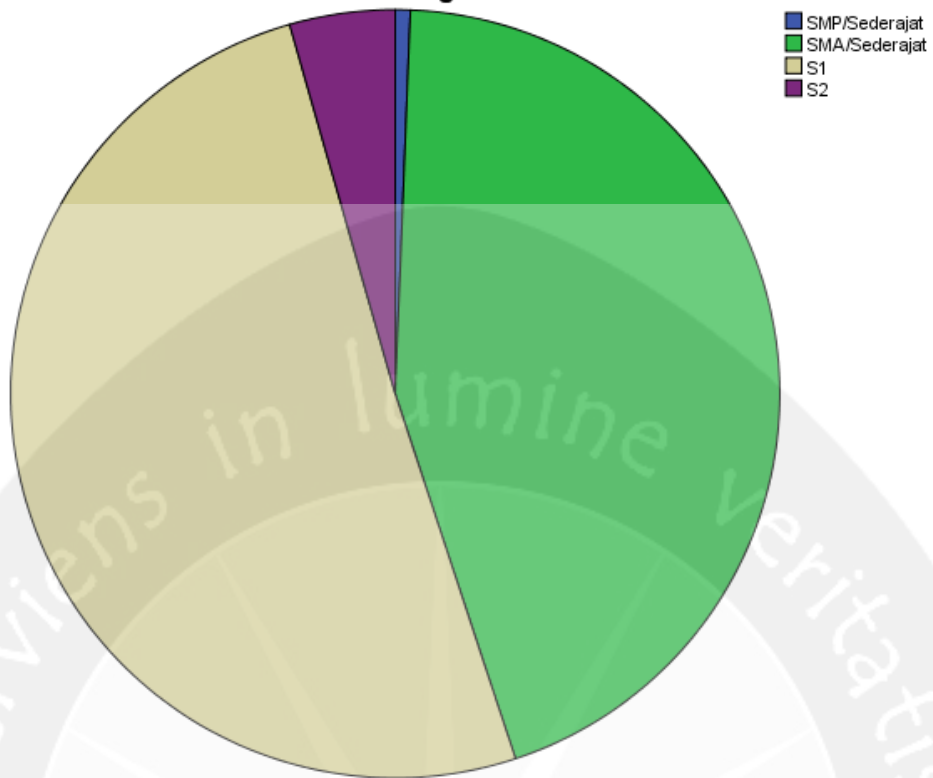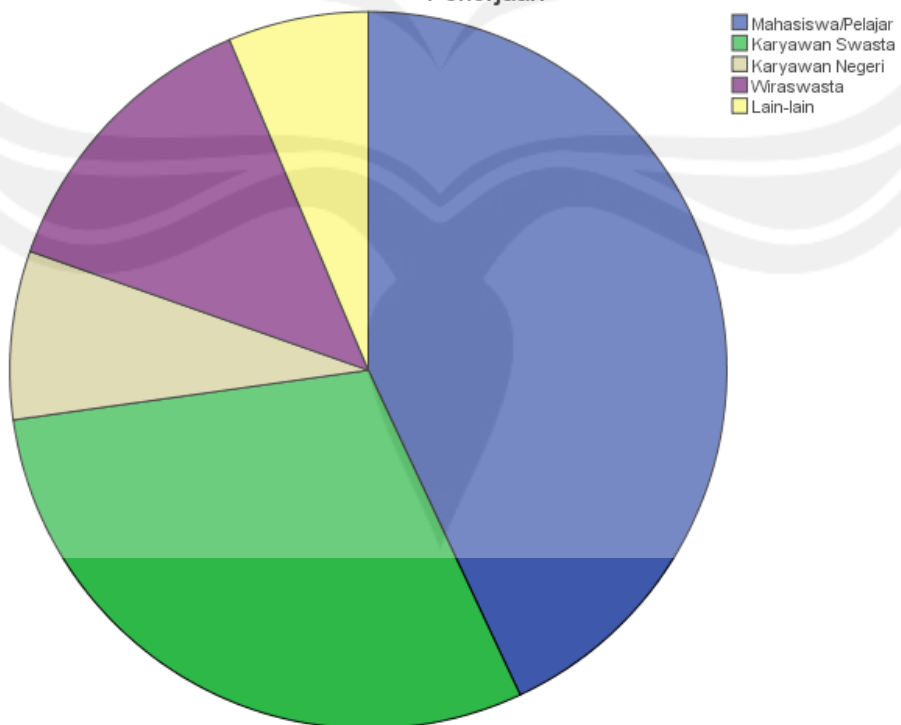
## Scale: SIKAP TERHADAP LINGKUNGAN (SKL)

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| | Valid | 158 | 100,0 |
| Cases | Excluded[a] | 0 | ,0 |
| | Total | 158 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| ,885 | 10 |

**Item Statistics**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| B1.1 | 4,95 | 1,711 | 158 |
| B1.2 | 5,15 | 1,609 | 158 |
| B1.3 | 5,23 | 1,608 | 158 |
| B1.4 | 3,87 | 2,263 | 158 |
| B1.5 | 4,70 | 1,754 | 158 |
| B1.6 | 4,77 | 1,791 | 158 |
| B1.7 | 4,45 | 1,836 | 158 |
| B1.8 | 4,81 | 1,792 | 158 |
| B1.9 | 4,56 | 1,960 | 158 |
| B1.10 | 4,73 | 1,836 | 158 |

**Scale Statistics**

| Mean | Variance | Std. Deviation | N of Items |
|---|---|---|---|
| 47,22 | 163,639 | 12,792 | 10 |

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|
| B1.1 | 42,27 | 139,460 | ,526 | ,880 |
| B1.2 | 42,07 | 139,454 | ,568 | ,877 |
| B1.3 | 41,99 | 145,025 | ,414 | ,887 |
| B1.4 | 43,35 | 130,842 | ,534 | ,883 |
| B1.5 | 42,52 | 132,098 | ,706 | ,868 |
| B1.6 | 42,45 | 136,873 | ,562 | ,878 |
| B1.7 | 42,77 | 135,871 | ,570 | ,877 |
| B1.8 | 42,41 | 130,906 | ,720 | ,866 |
| B1.9 | 42,66 | 124,341 | ,811 | ,858 |
| B1.10 | 42,49 | 127,538 | ,789 | ,861 |

# Scale: LOW ETNOSENTRIS (ETNO)

**Case Processing Summary**

|  |  | N | % |
|---|---|---|---|
| Cases | Valid | 158 | 100,0 |
|  | Excluded[a] | 0 | ,0 |
|  | Total | 158 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| ,948 | 17 |

**Item Statistics**

|  | Mean | Std. Deviation | N |
|---|---|---|---|
| B2.1 | 4,99 | 1,978 | 158 |
| B2.2 | 5,22 | 1,731 | 158 |
| B2.3 | 5,63 | 1,412 | 158 |
| B2.4 | 4,89 | 1,863 | 158 |
| B2.5 | 4,05 | 2,257 | 158 |
| B2.6 | 4,53 | 1,989 | 158 |
| B2.7 | 4,60 | 1,925 | 158 |
| B2.8 | 4,75 | 1,758 | 158 |
| B2.9 | 4,88 | 1,910 | 158 |
| B2.10 | 5,21 | 1,788 | 158 |
| B2.11 | 4,60 | 1,799 | 158 |
| B2.12 | 5,38 | 1,500 | 158 |
| B2.13 | 4,97 | 1,724 | 158 |
| B2.14 | 4,41 | 1,925 | 158 |
| B2.15 | 5,09 | 1,643 | 158 |
| B2.16 | 5,19 | 1,585 | 158 |
| B2.17 | 4,40 | 1,997 | 158 |

**Item-Total Statistics**

|  | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|
| B2.1 | 77,80 | 460,073 | ,708 | ,945 |
| B2.2 | 77,57 | 476,833 | ,584 | ,947 |
| B2.3 | 77,16 | 482,975 | ,629 | ,946 |
| B2.4 | 77,89 | 456,313 | ,807 | ,943 |
| B2.5 | 78,73 | 454,120 | ,674 | ,946 |
| B2.6 | 78,25 | 456,993 | ,741 | ,944 |
| B2.7 | 78,18 | 456,240 | ,779 | ,943 |
| B2.8 | 78,03 | 472,005 | ,640 | ,946 |
| B2.9 | 77,91 | 464,188 | ,682 | ,945 |
| B2.10 | 77,58 | 465,290 | ,720 | ,945 |
| B2.11 | 78,18 | 464,113 | ,731 | ,944 |
| B2.12 | 77,41 | 479,147 | ,649 | ,946 |
| B2.13 | 77,82 | 464,928 | ,754 | ,944 |
| B2.14 | 78,38 | 466,670 | ,645 | ,946 |
| B2.15 | 77,69 | 471,120 | ,704 | ,945 |
| B2.16 | 77,59 | 473,899 | ,690 | ,945 |
| B2.17 | 78,39 | 451,589 | ,806 | ,943 |

**Scale Statistics**

| Mean | Variance | Std. Deviation | N of Items |
|---|---|---|---|
| 82,78 | 524,004 | 22,891 | 17 |

# Scale: Kemauan mencari informasi (INFO)

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| | Valid | 158 | 100,0 |
| Cases | Excluded[a] | 0 | ,0 |
| | Total | 158 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| ,856 | 4 |

**Item Statistics**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| B3.10 | 4,85 | 1,382 | 158 |
| B3.11 | 4,66 | 1,412 | 158 |
| B3.12 | 4,94 | 1,346 | 158 |
| B3.13 | 4,97 | 1,356 | 158 |

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|
| B3.10 | 14,58 | 12,144 | ,731 | ,803 |
| B3.11 | 14,77 | 12,308 | ,685 | ,822 |
| B3.12 | 14,49 | 12,595 | ,699 | ,816 |
| B3.13 | 14,46 | 12,683 | ,679 | ,824 |

**Scale Statistics**

| Mean | Variance | Std. Deviation | N of Items |
|---|---|---|---|
| 19,43 | 21,087 | 4,592 | 4 |

# Scale: Citra Diri (CITRA)

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 158 | 100,0 |
| | Excluded[a] | 0 | ,0 |
| | Total | 158 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---|---|
| ,343 | 3 |

**Item Statistics**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| B3.7 | 5,20 | 1,888 | 158 |
| B3.8 | 4,54 | 1,571 | 158 |
| B3.9 | 4,43 | 1,656 | 158 |

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|
| B3.7 | 8,97 | 8,107 | -,027 | ,715 |
| B3.8 | 9,63 | 6,336 | ,326 | ,009 |
| B3.9 | 9,74 | 5,709 | ,370 | -,113[a] |

a. The value is negative due to a negative average covariance among items.

This violates reliability model assumptions. You may want to check item codings.

**Scale Statistics**

| Mean | Variance | Std. Deviation | N of Items |
|---|---|---|---|
| 14,17 | 11,378 | 3,373 | 3 |

# Scale: Citra Diri (CITRA) - B3.7

**Case Processing Summary**

|       |          | N   | %     |
|-------|----------|-----|-------|
| Cases | Valid    | 158 | 100,0 |
|       | Excluded[a] | 0   | ,0    |
|       | Total    | 158 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| ,715             | 2          |

**Item Statistics**

|      | Mean | Std. Deviation | N   |
|------|------|----------------|-----|
| B3.8 | 4,54 | 1,571          | 158 |
| B3.9 | 4,43 | 1,656          | 158 |

**Item-Total Statistics**

|      | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| B3.8 | 4,43                       | 2,744                          | ,557                             | .                                |
| B3.9 | 4,54                       | 2,467                          | ,557                             | .                                |

**Scale Statistics**

| Mean | Variance | Std. Deviation | N of Items |
|------|----------|----------------|------------|
| 8,97 | 8,107    | 2,847          | 2          |

# Scale: Nilai Sosial Kepemilikan MOBNAS (NSOSMOB)

**Case Processing Summary**

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 158 | 100,0 |
|       | Excluded[a]           | 0   | ,0    |
|       | Total                 | 158 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| ,662             | 3          |

**Item Statistics**

|      | Mean | Std. Deviation | N   |
|------|------|----------------|-----|
| B3.4 | 4,95 | 1,777          | 158 |
| B3.5 | 4,88 | 1,664          | 158 |
| B3.6 | 5,11 | 1,853          | 158 |

**Item-Total Statistics**

|      | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| B3.4 | 9,99                       | 7,286                          | ,657                             | ,297                             |
| B3.5 | 10,06                      | 8,130                          | ,616                             | ,379                             |
| B3.6 | 9,83                       | 10,690                         | ,216                             | ,891                             |

**Scale Statistics**

| Mean  | Variance | Std. Deviation | N of Items |
|-------|----------|----------------|------------|
| 14,94 | 16,748   | 4,092          | 3          |

# Scale: Efisiensi Emisi (EEMISI)

**Case Processing Summary**

|  |  | N | % |
|---|---|---|---|
| | Valid | 158 | 100,0 |
| Cases | Excluded[a] | 0 | ,0 |
| | Total | 158 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|---|---|
| ,712 | 3 |

**Item Statistics**

|  | Mean | Std. Deviation | N |
|---|---|---|---|
| B3.1 | 5,20 | 1,969 | 158 |
| B3.2 | 5,16 | 1,784 | 158 |
| B3.3 | 4,32 | 1,848 | 158 |

**Item-Total Statistics**

|  | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|
| B3.1 | 9,48 | 9,245 | ,570 | ,573 |
| B3.2 | 9,51 | 10,430 | ,550 | ,601 |
| B3.3 | 10,36 | 10,754 | ,477 | ,687 |

**Scale Statistics**

| Mean | Variance | Std. Deviation | N of Items |
|---|---|---|---|
| 14,68 | 19,952 | 4,467 | 3 |

# Scale: Niat Beli (NB)

**Case Processing Summary**

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 158 | 100,0 |
|       | Excluded<sup>a</sup>  | 0   | ,0    |
|       | Total                 | 158 | 100,0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | N of Items |
|------------------|------------|
| ,671             | 3          |

**Item Statistics**

|        | Mean | Std. Deviation | N   |
|--------|------|----------------|-----|
| B3.14  | 4,32 | 2,084          | 158 |
| B3.15  | 4,47 | 1,567          | 158 |
| B3.16  | 4,85 | 1,741          | 158 |

**Item-Total Statistics**

|        | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|--------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| B3.14  | 9,32                       | 8,755                          | ,380                             | ,747                             |
| B3.15  | 9,17                       | 9,837                          | ,559                             | ,501                             |
| B3.16  | 8,78                       | 9,023                          | ,548                             | ,493                             |

**Scale Statistics**

| Mean  | Variance | Std. Deviation | N of Items |
|-------|----------|----------------|------------|
| 13,64 | 17,786   | 4,217          | 3          |

**Variabel independen**

# T-Test (test value = 4)

**One-Sample Statistics**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| SKL | 158 | 4,7222 | 1,27921 | ,10177 |
| ETNO | 158 | 4,8697 | 1,34654 | ,10712 |
| INFO | 158 | 5,0396 | 1,38765 | ,11040 |
| CITRA | 158 | 4,4842 | 1,42366 | ,11326 |
| NSOSMOB | 158 | 4,9789 | 1,36413 | ,10852 |
| EEMISI | 158 | 4,8924 | 1,48894 | ,11845 |

**One-Sample Test**

| | Test Value = 4 | | | | | |
|---|---|---|---|---|---|---|
| | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
| | | | | | Lower | Upper |
| SKL | 7,096 | 157 | ,000 | ,72215 | ,5211 | ,9232 |
| ETNO | 8,119 | 157 | ,000 | ,86969 | ,6581 | 1,0813 |
| INFO | 9,417 | 157 | ,000 | 1,03956 | ,8215 | 1,2576 |
| CITRA | 4,275 | 157 | ,000 | ,48418 | ,2605 | ,7079 |
| NSOSMOB | 9,020 | 157 | ,000 | ,97890 | ,7645 | 1,1933 |
| EEMISI | 7,534 | 157 | ,000 | ,89241 | ,6584 | 1,1264 |

**One-Sample Statistics**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| ETNO | 158 | 4,8697 | 1,34654 | ,10712 |
| INFO | 158 | 5,0396 | 1,38765 | ,11040 |
| NSOSMOB | 158 | 4,9789 | 1,36413 | ,10852 |
| EEMISI | 158 | 4,8924 | 1,48894 | ,11845 |
| SKL | 158 | 4,7222 | 1,27921 | ,10177 |

# T-Test (test value = 4,48)

**One-Sample Test**

| | Test Value = 4.48 | | | | | |
|---|---|---|---|---|---|---|
| | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
| | | | | | Lower | Upper |
| ETNO | 3,638 | 157 | ,000 | ,38969 | ,1781 | ,6013 |
| INFO | 5,069 | 157 | ,000 | ,55956 | ,3415 | ,7776 |
| NSOSMOB | 4,597 | 157 | ,000 | ,49890 | ,2845 | ,7133 |
| EEMISI | 3,482 | 157 | ,001 | ,41241 | ,1784 | ,6464 |
| SKL | 2,379 | 157 | ,019 | ,24215 | ,0411 | ,4432 |

## T-Test (test value = 4,72)

**One-Sample Statistics**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| ETNO | 158 | 4,8697 | 1,34654 | ,10712 |
| INFO | 158 | 5,0396 | 1,38765 | ,11040 |
| NSOSMOB | 158 | 4,9789 | 1,36413 | ,10852 |
| EEMISI | 158 | 4,8924 | 1,48894 | ,11845 |

**One-Sample Test**

| | Test Value = 4.72 | | | | | |
|---|---|---|---|---|---|---|
| | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
| | | | | | Lower | Upper |
| ETNO | 1,397 | 157 | ,164 | ,14969 | -,0619 | ,3613 |
| INFO | 2,895 | 157 | ,004 | ,31956 | ,1015 | ,5376 |
| NSOSMOB | 2,386 | 157 | ,018 | ,25890 | ,0445 | ,4733 |
| EEMISI | 1,455 | 157 | ,148 | ,17241 | -,0616 | ,4064 |

## T-Test (test value = 4,89)

**One-Sample Statistics**

| | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|
| INFO | 158 | 5,0396 | 1,38765 | ,11040 |
| NSOSMOB | 158 | 4,9789 | 1,36413 | ,10852 |

**One-Sample Test**

| | Test Value = 4.89 | | | | | |
|---|---|---|---|---|---|---|
| | t | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
| | | | | | Lower | Upper |
| INFO | 1,355 | 157 | ,177 | ,14956 | -,0685 | ,3676 |
| NSOSMOB | ,819 | 157 | ,414 | ,08890 | -,1255 | ,3033 |

# T-Test (test value = 4,98)

**One-Sample Statistics**

|      | N   | Mean   | Std. Deviation | Std. Error Mean |
|------|-----|--------|----------------|-----------------|
| INFO | 158 | 5,0396 | 1,38765        | ,11040          |

**One-Sample Test**

|      | Test Value = 4.98 | | | | | |
|------|-------|-----|-----------------|-----------------|----------------------------------------------|--------|
|      | t     | df  | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
|      |       |     |                 |                 | Lower  | Upper  |
| INFO | ,539  | 157 | ,590            | ,05956          | -,1585 | ,2776  |

**Variabel dependen**

## T-Test Niat Beli

**One-Sample Statistics**

|       | N   | Mean | Std. Deviation | Std. Error Mean |
|-------|-----|------|----------------|-----------------|
| B3.14 | 158 | 4,32 | 2,084          | ,166            |
| B3.15 | 158 | 4,47 | 1,567          | ,125            |
| B3.16 | 158 | 4,85 | 1,741          | ,138            |

**One-Sample Test**

|       | Test Value = 4 | | | | | |
|-------|-------|-----|-----------------|------------|-------------------------------------------|-------|
|       | t     | df  | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference | |
|       |       |     |                 |            | Lower | Upper |
| B3.14 | 1,908 | 157 | ,058            | ,316       | -,01  | ,64   |
| B3.15 | 3,758 | 157 | ,000            | ,468       | ,22   | ,71   |
| B3.16 | 6,170 | 157 | ,000            | ,854       | ,58   | 1,13  |

**LAMPIRAN 6**

# Regression

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | EEMISI, CITRA, SKL, NSOSMOB, INFO, ETNO[b] | . | Enter |

a. Dependent Variable: NB

b. All requested variables entered.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | ,640[a] | ,410 | ,386 | 1,15899 |

a. Predictors: (Constant), EEMISI, CITRA, SKL, NSOSMOB, INFO, ETNO

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 140,803 | 6 | 23,467 | 17,470 | ,000[b] |
| | Residual | 202,832 | 151 | 1,343 | | |
| | Total | 343,634 | 157 | | | |

a. Dependent Variable: NB

b. Predictors: (Constant), EEMISI, CITRA, SKL, NSOSMOB, INFO, ETNO

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | ,264 | ,535 | | ,493 | ,623 |
| | SKL | ,098 | ,109 | ,084 | ,891 | ,374 |
| | ETNO | ,446 | ,203 | ,406 | 2,203 | ,029 |
| | INFO | ,037 | ,175 | ,034 | ,209 | ,834 |
| | CITRA | ,008 | ,074 | ,008 | ,107 | ,915 |
| | NSOSMOB | ,171 | ,090 | ,157 | 1,905 | ,059 |
| | EEMISI | ,142 | ,071 | ,143 | 2,006 | ,047 |

a. Dependent Variable: NB

| df | t_1 | t_5 | r_0.01 | r_0.05 |
|---|---|---|---|---|
| 1 | 31,82 | 6,31 | 1 | 0,99 |
| 2 | 6,96 | 2,92 | 0,98 | 0,9 |
| 3 | 4,54 | 2,35 | 0,93 | 0,81 |
| 4 | 3,75 | 2,13 | 0,88 | 0,73 |
| 5 | 3,36 | 2,02 | 0,83 | 0,67 |
| 6 | 3,14 | 1,94 | 0,79 | 0,62 |
| 7 | 3 | 1,89 | 0,75 | 0,58 |
| 8 | 2,9 | 1,86 | 0,72 | 0,55 |
| 9 | 2,82 | 1,83 | 0,69 | 0,52 |
| 10 | 2,76 | 1,81 | 0,66 | 0,5 |
| 11 | 2,72 | 1,8 | 0,63 | 0,48 |
| 12 | 2,68 | 1,78 | 0,61 | 0,46 |
| 13 | 2,65 | 1,77 | 0,59 | 0,44 |
| 14 | 2,62 | 1,76 | 0,57 | 0,43 |
| 15 | 2,6 | 1,75 | 0,56 | 0,41 |
| 16 | 2,58 | 1,75 | 0,54 | 0,4 |
| 17 | 2,57 | 1,74 | 0,53 | 0,39 |
| 18 | 2,55 | 1,73 | 0,52 | 0,38 |
| 19 | 2,54 | 1,73 | 0,5 | 0,37 |
| 20 | 2,53 | 1,72 | 0,49 | 0,36 |
| 21 | 2,52 | 1,72 | 0,48 | 0,35 |
| 22 | 2,51 | 1,72 | 0,47 | 0,34 |
| 23 | 2,5 | 1,71 | 0,46 | 0,34 |
| 24 | 2,49 | 1,71 | 0,45 | 0,33 |
| 25 | 2,49 | 1,71 | 0,45 | 0,32 |
| 26 | 2,48 | 1,71 | 0,44 | 0,32 |
| 27 | 2,47 | 1,7 | 0,43 | 0,31 |
| 28 | 2,47 | 1,7 | 0,42 | 0,31 |
| 29 | 2,46 | 1,7 | 0,42 | 0,3 |
| 30 | 2,46 | 1,7 | 0,41 | 0,3 |
| 31 | 2,45 | 1,7 | 0,4 | 0,29 |
| 32 | 2,45 | 1,69 | 0,4 | 0,29 |
| 33 | 2,44 | 1,69 | 0,39 | 0,28 |
| 34 | 2,44 | 1,69 | 0,39 | 0,28 |
| 35 | 2,44 | 1,69 | 0,38 | 0,27 |
| 36 | 2,43 | 1,69 | 0,38 | 0,27 |
| 37 | 2,43 | 1,69 | 0,37 | 0,27 |
| 38 | 2,43 | 1,69 | 0,37 | 0,26 |
| 39 | 2,43 | 1,68 | 0,36 | 0,26 |
| 40 | 2,42 | 1,68 | 0,36 | 0,26 |
| 41 | 2,42 | 1,68 | 0,35 | 0,25 |
| 42 | 2,42 | 1,68 | 0,35 | 0,25 |
| 43 | 2,42 | 1,68 | 0,35 | 0,25 |
| 44 | 2,41 | 1,68 | 0,34 | 0,25 |
| 45 | 2,41 | 1,68 | 0,34 | 0,24 |
| 46 | 2,41 | 1,68 | 0,33 | 0,24 |
| 47 | 2,41 | 1,68 | 0,33 | 0,24 |
| 48 | 2,41 | 1,68 | 0,33 | 0,24 |
| 49 | 2,4 | 1,68 | 0,32 | 0,23 |

Lanjutan

| df | t_1 | t_5 | r_0.01 | r_0.05 |
|---|---|---|---|---|
| 50 | 2,4 | 1,68 | 0,32 | 0,23 |
| 51 | 2,4 | 1,68 | 0,32 | 0,23 |
| 52 | 2,4 | 1,67 | 0,32 | 0,23 |
| 53 | 2,4 | 1,67 | 0,31 | 0,22 |
| 54 | 2,4 | 1,67 | 0,31 | 0,22 |
| 55 | 2,4 | 1,67 | 0,31 | 0,22 |
| 56 | 2,39 | 1,67 | 0,3 | 0,22 |
| 57 | 2,39 | 1,67 | 0,3 | 0,22 |
| 58 | 2,39 | 1,67 | 0,3 | 0,21 |
| 59 | 2,39 | 1,67 | 0,3 | 0,21 |
| 60 | 2,39 | 1,67 | 0,29 | 0,21 |
| 61 | 2,39 | 1,67 | 0,29 | 0,21 |
| 62 | 2,39 | 1,67 | 0,29 | 0,21 |
| 63 | 2,39 | 1,67 | 0,29 | 0,21 |
| 64 | 2,39 | 1,67 | 0,29 | 0,2 |
| 65 | 2,39 | 1,67 | 0,28 | 0,2 |
| 66 | 2,38 | 1,67 | 0,28 | 0,2 |
| 67 | 2,38 | 1,67 | 0,28 | 0,2 |
| 68 | 2,38 | 1,67 | 0,28 | 0,2 |
| 69 | 2,38 | 1,67 | 0,28 | 0,2 |
| 70 | 2,38 | 1,67 | 0,27 | 0,2 |
| 71 | 2,38 | 1,67 | 0,27 | 0,19 |
| 72 | 2,38 | 1,67 | 0,27 | 0,19 |
| 73 | 2,38 | 1,67 | 0,27 | 0,19 |
| 74 | 2,38 | 1,67 | 0,27 | 0,19 |
| 75 | 2,38 | 1,67 | 0,26 | 0,19 |
| 76 | 2,38 | 1,67 | 0,26 | 0,19 |
| 77 | 2,38 | 1,66 | 0,26 | 0,19 |
| 78 | 2,38 | 1,66 | 0,26 | 0,19 |
| 79 | 2,37 | 1,66 | 0,26 | 0,18 |
| 80 | 2,37 | 1,66 | 0,26 | 0,18 |
| 81 | 2,37 | 1,66 | 0,25 | 0,18 |
| 82 | 2,37 | 1,66 | 0,25 | 0,18 |
| 83 | 2,37 | 1,66 | 0,25 | 0,18 |
| 84 | 2,37 | 1,66 | 0,25 | 0,18 |
| 85 | 2,37 | 1,66 | 0,25 | 0,18 |
| 86 | 2,37 | 1,66 | 0,25 | 0,18 |
| 87 | 2,37 | 1,66 | 0,25 | 0,18 |
| 88 | 2,37 | 1,66 | 0,24 | 0,17 |
| 89 | 2,37 | 1,66 | 0,24 | 0,17 |
| 90 | 2,37 | 1,66 | 0,24 | 0,17 |
| 91 | 2,37 | 1,66 | 0,24 | 0,17 |
| 92 | 2,37 | 1,66 | 0,24 | 0,17 |
| 93 | 2,37 | 1,66 | 0,24 | 0,17 |
| 94 | 2,37 | 1,66 | 0,24 | 0,17 |
| 95 | 2,37 | 1,66 | 0,24 | 0,17 |
| 96 | 2,37 | 1,66 | 0,23 | 0,17 |
| 97 | 2,37 | 1,66 | 0,23 | 0,17 |

Lanjutan

| df | t_1 | t_5 | r_0.01 | r_0.05 |
|---|---|---|---|---|
| 98 | 2,37 | 1,66 | 0,23 | 0,17 |
| 99 | 2,36 | 1,66 | 0,23 | 0,16 |
| 100 | 2,36 | 1,66 | 0,23 | 0,16 |
| 101 | 2,36 | 1,66 | 0,23 | 0,16 |
| 102 | 2,36 | 1,66 | 0,23 | 0,16 |
| 103 | 2,36 | 1,66 | 0,23 | 0,16 |
| 104 | 2,36 | 1,66 | 0,23 | 0,16 |
| 105 | 2,36 | 1,66 | 0,22 | 0,16 |
| 106 | 2,36 | 1,66 | 0,22 | 0,16 |
| 107 | 2,36 | 1,66 | 0,22 | 0,16 |
| 108 | 2,36 | 1,66 | 0,22 | 0,16 |
| 109 | 2,36 | 1,66 | 0,22 | 0,16 |
| 110 | 2,36 | 1,66 | 0,22 | 0,16 |
| 111 | 2,36 | 1,66 | 0,22 | 0,16 |
| 112 | 2,36 | 1,66 | 0,22 | 0,15 |
| 113 | 2,36 | 1,66 | 0,22 | 0,15 |
| 114 | 2,36 | 1,66 | 0,22 | 0,15 |
| 115 | 2,36 | 1,66 | 0,21 | 0,15 |
| 116 | 2,36 | 1,66 | 0,21 | 0,15 |
| 117 | 2,36 | 1,66 | 0,21 | 0,15 |
| 118 | 2,36 | 1,66 | 0,21 | 0,15 |
| 119 | 2,36 | 1,66 | 0,21 | 0,15 |
| 120 | 2,36 | 1,66 | 0,21 | 0,15 |
| 121 | 2,36 | 1,66 | 0,21 | 0,15 |
| 122 | 2,36 | 1,66 | 0,21 | 0,15 |
| 123 | 2,36 | 1,66 | 0,21 | 0,15 |
| 124 | 2,36 | 1,66 | 0,21 | 0,15 |
| 125 | 2,36 | 1,66 | 0,21 | 0,15 |
| 126 | 2,36 | 1,66 | 0,21 | 0,15 |
| 127 | 2,36 | 1,66 | 0,2 | 0,15 |
| 128 | 2,36 | 1,66 | 0,2 | 0,14 |
| 129 | 2,36 | 1,66 | 0,2 | 0,14 |
| 130 | 2,36 | 1,66 | 0,2 | 0,14 |
| 131 | 2,36 | 1,66 | 0,2 | 0,14 |
| 132 | 2,35 | 1,66 | 0,2 | 0,14 |
| 133 | 2,35 | 1,66 | 0,2 | 0,14 |
| 134 | 2,35 | 1,66 | 0,2 | 0,14 |
| 135 | 2,35 | 1,66 | 0,2 | 0,14 |
| 136 | 2,35 | 1,66 | 0,2 | 0,14 |
| 137 | 2,35 | 1,66 | 0,2 | 0,14 |
| 138 | 2,35 | 1,66 | 0,2 | 0,14 |
| 139 | 2,35 | 1,66 | 0,2 | 0,14 |
| 140 | 2,35 | 1,66 | 0,2 | 0,14 |
| 141 | 2,35 | 1,66 | 0,19 | 0,14 |
| 142 | 2,35 | 1,66 | 0,19 | 0,14 |
| 143 | 2,35 | 1,66 | 0,19 | 0,14 |
| 144 | 2,35 | 1,66 | 0,19 | 0,14 |
| 145 | 2,35 | 1,66 | 0,19 | 0,14 |

Lanjutan

| df | t_1 | t_5 | r_0.01 | r_0.05 |
|---|---|---|---|---|
| 146 | 2,35 | 1,66 | 0,19 | 0,14 |
| 147 | 2,35 | 1,66 | 0,19 | 0,14 |
| 148 | 2,35 | 1,66 | 0,19 | 0,13 |
| 149 | 2,35 | 1,66 | 0,19 | 0,13 |
| 150 | 2,35 | 1,66 | 0,19 | 0,13 |
| 151 | 2,35 | 1,66 | 0,19 | 0,13 |
| 152 | 2,35 | 1,65 | 0,19 | 0,13 |
| 153 | 2,35 | 1,65 | 0,19 | 0,13 |
| 154 | 2,35 | 1,65 | 0,19 | 0,13 |
| 155 | 2,35 | 1,65 | 0,19 | 0,13 |
| 156 | 2,35 | 1,65 | 0,18 | 0,13 |
| 157 | 2,35 | 1,65 | 0,18 | 0,13 |
| 158 | 2,35 | 1,65 | 0,18 | 0,13 |
| 159 | 2,35 | 1,65 | 0,18 | 0,13 |
| 160 | 2,35 | 1,65 | 0,18 | 0,13 |

TERENCE A. SHIMP and SUBHASH SHARMA*

The concept of consumer ethnocentrism is introduced and a corresponding measure, the CETSCALE, is formulated and validated. Four separate studies provide support for the CETSCALE's reliability and convergent and discriminant validity. A series of nomological validity tests show consumer ethnocentrism to be moderately predictive of theoretically related constructs.

# Consumer Ethnocentrism: Construction and Validation of the CETSCALE

American-made products historically provided the frame of reference whereby American consumers evaluated imported products, which often were considered inferior and eschewed. Though large numbers of consumers now are willing to consider foreign-made goods as alternatives to American-made items, some consumers staunchly refuse to buy imported products and chastise fellow consumers for doing so, claiming that buying foreign goods puts Americans out of work, hurts the economy, or is unpatriotic. Other consumers are equally vociferous in defending their right to buy whatever products they wish, regardless of place of manufacture.

A study was designed to develop a psychometrically rigorous scale for measuring a concept we term "consumer ethnocentrism." Though the general applicability of ethnocentrism to the study of consumer behavior has been recognized (e.g., Berkman and Gilson 1978; Markin 1974), no known work has reformulated the concept specifically to suit the study of marketing and consumer behavior.

## THE CONSUMER ETHNOCENTRISM CONCEPT

The term "consumer ethnocentrism" is adapted from the general concept of ethnocentrism introduced more than 80 years ago by Sumner (1906). Though originally a purely sociological concept to distinguish between in-

groups (those groups with which an individual identifies) and outgroups (those regarded as antithetical to the ingroup), ethnocentrism has become a psychosocial construct with relevance to individual-level personality systems as well as to the more general cultural- and social-analytic frameworks (Levine and Campbell 1972). In general, the concept of ethnocentrism represents the universal proclivity for people to view their own group as the center of the universe, to interpret other social units from the perspective of their own group, and to reject persons who are culturally dissimilar while blindly accepting those who are culturally like themselves (Booth 1979; Worchel and Cooper 1979). The symbols and values of one's own ethnic or national group become objects of pride and attachment, whereas symbols of other groups may become objects of contempt (Levine and Campbell 1972).

We use the term "consumer ethnocentrism" to represent the beliefs held by American consumers about the appropriateness, indeed morality, of purchasing foreign-made products. From the perspective of ethnocentric consumers, purchasing imported products is wrong because, in their minds, it hurts the domestic economy, causes loss of jobs, and is plainly unpatriotic; products from other countries (i.e., outgroups) are objects of contempt to highly ethnocentric consumers. To nonethnocentric consumers, however, foreign products are objects to be evaluated on their own merits without consideration for where they are made (or perhaps to be evaluated more favorably *because* they are manufactured outside the United States). In functional terms, consumer ethnocentrism gives the individual a sense of identity, feelings of belongingness, and, most important for our purposes, an understanding of what purchase behavior is acceptable or unacceptable to the ingroup.

## SCALE DEVELOPMENT

We have developed an instrument, termed the CET-SCALE, to measure *consumers'* *ethnocentric* *tendencies* related to purchasing foreign- versus American-made products. We characterize the scale as a measure of "tendency" rather than "attitude," because the latter term suggests a greater degree of object specificity than the CETSCALE is intended to capture. "Attitude" is used most appropriately in reference to the consumer's feelings toward a specific object, such as a particular automobile model. "Tendency" captures the more general notion of a disposition to act in some consistent fashion toward foreign products *in toto*.

Construction of a unique scale is necessary because the classic measure of ethnocentrism, the California ethnocentrism scale (Adorno et al. 1950), is not directly relevant to the study of consumer behavior. It was not developed for that purpose and contains items inappropriate for the contemporary American situation (e.g., "European refugees may be in need, but it would be a big mistake to lower our immigration quotas and allow them to flood the country"). More recent ethnocentrism scales are available (e.g., Chang and Ritter 1976; Warr, Faust, and Harrison 1967), but they also have little relevance to the study of consumer behavior and marketing phenomena.

### Domain Specification and Item Generation

A preliminary study provided insight into consumer thoughts about foreign-made products. More than 800 consumers expressed their opinions in response to the request to "describe your views of whether it is right and appropriate for American consumers to purchase products that are manufactured in foreign countries." Content analysis of the responses, along with researcher intuition and insights from pertinent literature, led to the specification of seven facets of consumers' orientations toward foreign products: (1) consumer ethnocentric tendencies, (2) price-value perceptions, (3) self-interest concerns, (4) reciprocity norms, and (5) rationalization-of-choice, (6) restrictions-mentality, and (7) freedom-of-choice views.[1]

Multiple items were generated to scale all seven dimensions. The preliminary study was the primary source of items. Editing of redundant statements reduced the initial pool from 225 to 180 items, all of which have the desirable property of being worded in the common consumer's vernacular rather than in formal academic language.

### Scale Purification

*Judgmental panel screening*. Individual members of a six-person judgmental panel (five holding Ph.D.s and one advanced doctoral student) assigned each of the 180 items to one of the seven conceptual dimensions. An *a priori* decision rule specified retaining an item only if at least five of six judges chose the same category. One hundred twenty-five items satisfied the rule; 25 of those were eliminated subsequently because they were redundant with other items.

*First purification study*. A mail questionnaire consisting of 117 Likert-type statements was administered to a sample of 850 households. In addition to the 100 statements that satisfied the initial screening and editing, 17 items from Adorno et al.'s (1950) patriotism (P) and politicoeconomic conservatism (PEC) subscales of the classic F (for fascism) scale were included for validation (details follow in the construct validation section).[2] Items were ordered randomly as 7-point Likert-type statements. Four hundred seven usable questionnaires were returned.

The 100 items were subjected to common factor analysis. Because the objective at this early juncture was to verify the postulated dimensions and to reduce the many items to a more tractable number, we used a moderately stringent decision rule and deleted all items loading $<.5$ on any factor. Two dimensions and 57 items were deleted. Twenty-five of the remaining 43 items loaded on the consumer ethnocentrism dimension; all five of Adorno et al.'s P-subscale items satisfied the .5 decision rule and six of the PEC-subscale items satisfied the rule. Thus, 54 items were retained for the next round of scale purification. The 43 non-Adorno items were of primary concern.

*Second purification study*. Fifty-four items forming a new questionnaire were ordered randomly as 7-point Likert-type statements. Lists were purchased from a national mailing list company and 1000 questionnaires were mailed to households in each of three purposively selected metropolitan areas: Detroit, Denver, and Los Angeles. Approximately 950 questionnaires also were mailed to an available list of households in the two Carolinas. The response rates from the three metropolitan areas were virtually equal at 32.2, 32.3, and 31.5% usable questionnaires returned from Detroit, Denver, and Los Angeles, respectively. The response rate for the Carolinas was higher, nearly 60%, probably because respondents in this sample had served as panel members before and had been compensated for periodically completing questionnaires.

The 43 non-Adorno items were subjected to a confir-

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[1]Our original intent was to scale the general construct of consumer orientations toward foreign products, which was to include consumer ethnocentrism as just one of seven dimensions. The six nonethnocentric dimensions failed to satisfy psychometric requirements, however, and ultimately were deleted. In the following discussion these eliminated dimensions are mentioned for accuracy in describing the full scale development process leading to the CETSCALE.

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[2]Adorno et al.'s (1950) patriotism (P) and politicoeconomic conservatism (PEC) subscales actually contain 10 and 14 items, respectively. However, because many of these items are outdated, only five of the P-subscale items and 12 of the PEC-subscale items were used. Slight wording changes were made to modernize the statements.

matory factor analysis designed to (1) substantiate the dimensionality of the 5-factor structure obtained from the first purification study and (2) eliminate additional unreliable items. An administrative decision rule specified that items loading less than .707 (the square root of .5) on a given factor be regarded as unreliable and therefore eliminable (cf. Fornell and Larcker 1981). The analysis (with data pooled across all four geographic areas) rejected one of the five conceptual dimensions (along with the three items postulated to load on it) and also found unreliable 22 of the items postulated to load on the four remaining conceptual dimensions.

The scale at this stage of development consisted of four conceptual dimensions and 18 items, 12 items loading on the consumer ethnocentrism dimension and two items on each of three remaining conceptual dimensions. Two features of this "final" scale were disturbing: two thirds of the items represented only one of four dimensions, and correlations between the complete 18-item scale and theoretically related variables (discussed subsequently in the construct validity section) were virtually identical to the correlations between these same variables and the 12-item consumer ethnocentrism subscale. We therefore decided to eliminate the three nonethnocentrism dimensions and to focus exclusively on refining the measure of consumer ethnocentrism, the CETSCALE.

*CETSCALE refinement.* Of the 25 items remaining in the consumer ethnocentrism dimension after the first purification study, 13 were found to be unreliable when analyzed by a confirmatory factor model that simultaneously tested all four conceptual dimensions and all 43 items. However, because only one conceptual dimension was retained, it was appropriate to test a confirmatory model containing all 25 of the items that passed the initial purification test.

An aggregate test was performed by pooling data from the four geographic areas into one overall sample; disaggregate tests also were run on data from each of the four areas. Results across all five tests consistently showed that 17 items satisfied the .5 reliability criterion. These 17 items represent the final CETSCALE. The items and their reliability values are reported in Table 1.

With reliable items identified, a final confirmatory analysis tested factor-structure equality across the four geographic areas by comparing a model having all parameters for all geographic areas set equal (i.e., a constrained solution) with a model allowing all parameters to vary freely (unconstrained solution). The unconstrained solution yielded a marginally better fit ($p < .1$), but the near equivalency of goodness-of-fit indices for the two solutions indicates that the four geographic areas are essentially comparable in their response to the CETSCALE.

### RELIABILITY ASSESSMENT AND CONSTRUCT VALIDATION

Four separate studies were performed to assess the reliability and construct validity of the 17-item CET-

**Table 1**
**17-ITEM CETSCALE[a]**

| Item | Reliability[b] |
|---|---|
| 1. American people should always buy American-made products instead of imports. | .65 |
| 2. Only those products that are unavailable in the U.S. should be imported. | .63 |
| 3. Buy American-made products. Keep America working. | .51 |
| 4. American products, first, last, and foremost. | .65 |
| 5. Purchasing foreign-made products is un-American. | .64 |
| 6. It is not right to purchase foreign products, because it puts Americans out of jobs. | .72 |
| 7. A real American should always buy American-made products. | .70 |
| 8. We should purchase products manufactured in America instead of letting other countries get rich off us. | .67 |
| 9. It is always best to purchase American products. | .59 |
| 10. There should be very little trading or purchasing of goods from other countries unless out of necessity. | .53 |
| 11. Americans should not buy foreign products, because this hurts American business and causes unemployment. | .67 |
| 12. Curbs should be put on all imports. | .52 |
| 13. It may cost me in the long-run but I prefer to support American products. | .55 |
| 14. Foreigners should not be allowed to put their products on our markets. | .52 |
| 15. Foreign products should be taxed heavily to reduce their entry into the U.S. | .58 |
| 16. We should buy from foreign countries only those products that we cannot obtain within our own country. | .60 |
| 17. American consumers who purchase products made in other countries are responsible for putting their fellow Americans out of work. | .65 |

[a]Response format is 7-point Likert-type scale (strongly agree = 7, strongly disagree = 1). Range of scores is from 17 to 119.
[b]Calculated from confirmatory factor analysis of data from four-areas study.

SCALE. For ease of reference, the studies are termed the "four-areas study," the "Carolinas study," the "national consumer good study," and the "crafted-with-pride study." Each study's sample characteristics are reported in Table 2.

*Four-areas study.* This study provided the sample base from which the final 17-item CETSCALE was derived. Measures of attitudes toward foreign-made products, purchase intentions, and ownership of imported automobiles were taken at the same time consumer ethnocentrism was measured. Included were samples of 322, 323, and 315 respondents from the Detroit, Denver, and Los Angeles metropolitan areas, respectively, and 575 respondents from the Carolinas. Mean scores and standard deviations on the CETSCALE for the four geographic areas are Detroit M = 68.58, SD = 25.96; Carolinas M = 61.28, SD = 24.41; Denver M = 57.84, SD = 26.10; and Los Angeles M = 56.62, SD = 26.37.

## Table 2
### SAMPLE CHARACTERISTICS FOR FOUR STUDIES

| | Four-areas study | Carolinas study | National consumer good study | Crafted-with-pride study |
|---|---|---|---|---|
| Sample size | 1535 | 417 | 2000+ | 145 |
| Sex (%) | | | | |
| Male | 38.6 | 54.5 | 30.0 | 55.9 |
| Female | 61.4 | 45.5 | 70.0 | 44.1 |
| Age (%) | | | | |
| Under 25 | 6.3 | 1.2 | 16.7 | NA[a] |
| 25–34 | 22.9 | 2.6 | 24.7 | NA |
| 35–44 | 22.8 | 18.0 | 26.2[b] | NA |
| 45–54 | 17.1 | 26.0 | 32.4[c] | NA |
| 55–64 | 18.2 | 29.3 | | NA |
| Over 64 | 12.6 | 22.8 | | NA |
| Income (%) | | | | |
| Under $15,000 | 16.6 | 12.5 | 21.8[d] | NA |
| $15,001–30,000 | 36.3 | 32.5 | 25.4 | NA |
| $30,001–40,000 | 20.5 | 23.5 | 21.3 | NA |
| Over $40,000 | 26.7 | 31.5 | 31.5 | NA |

[a]Specific age delineations are irrelevant for this student sample, though the means and median ages are 21.5 and 21.0, respectively.

[b]This figure actually represents the percentage of respondents whose age is 35–49.

[c]This figure actually represents the percentage of respondents age 50 and older.

[d]This figure and those below it actually represent percentages for the following income categories: under $20,000; $20,000–29,999; $30,000–39,999; and over $40,000.

*Carolinas study.* The 417 respondents in this study are a subsample of the Carolinas group in the four-areas study. The distinguishing feature, however, is that *two full years prior* to completing the 17-item CETSCALE this subsample had responded to a detailed questionnaire measuring their foreign automobile ownership, purchase intentions, attitudes, beliefs, etc. We therefore were able to construct-validate the CETSCALE against data that, because of the long time separation between the two sets of measurements, are essentially free of artificial shared variance. On the 17-item CETSCALE the Carolinas subsample had a mean score of 61.73 and standard deviation of 24.24.

*National consumer good study.* This study, performed by a national marketing research agency, measured consumer opinions toward a category of consumer goods that has become increasingly vulnerable to foreign competition.[3] A national quota sample (by age and sex) of major areas of dominant influence (ADIs) participated in two phases of data collection. An initial sample of more than 3000 consumers responded to a telephone survey asking their opinions about domestic and imported items in the product category. Several weeks later these same households received a followup mail questionnaire

that included psychographic statements, demographic questions, and a reduced, 10-item version of the CETSCALE.[4] A total of more than 2000 respondents (over 60% usable response rate) completed the mail questionnaire. On the basis of a 5-point Likert scale (a 7-point scale was used in the other studies), this sample's mean is 29.28 with a standard deviation of 11.58 on the 10-item CETSCALE.

*Crafted-with-pride study.* College students ($n = 145$) participated in a two-phase study that assessed their reactions to commercials from the ongoing "Crafted with Pride in U.S.A." advertising campaign. This campaign—jointly sponsored by the American Fiber, Textile, and Apparel Coalition and the American Textile Manufacturers Institution—was designed to make consumers more aware of the country of origin for apparel products and to enhance long-term preference for American-made garments. Our study, which was entirely independent of the industry group's research and proprietary interests, examined student responses to the crafted-with-pride campaign simply because it provided a relevant target against which to validate the CETSCALE.

In a first data collection phase, a questionnaire administered during classes measured consumer ethnocentrism (17-item CETSCALE) and, to examine discriminant validity, three intuitively related constructs: dogmatism, patriotism, and politicoeconomic conservatism. Individuals scoring high on the CETSCALE were expected to be more dogmatic, more patriotic, and more conservative. Five weeks later the same students viewed three 30-second crafted-with-pride commercials that portrayed celebrities (e.g., Bob Hope, O. J. Simpson) espousing their personal preferences for American-made apparel. Students then completed a questionnaire that measured their consumer ethnocentrism for a second time and also their attitudes and purchase intentions toward domestic and imported apparel. The students' mean scores on the CETSCALE and standard deviation for the first and second administrations are $M(1) = 51.92$, $SD(1) = 16.37$; $M(2) = 53.39$, $SD(2) = 16.52$.

### Reliability Assessment

The CETSCALE's internal consistency reliability is very high. Coefficient alpha for the four studies ranges from .94 to .96. Test-retest reliability could be assessed only in the crafted-with-pride study, in which the CETSCALE was administered on two occasions separated by a 5-week period. The correlation between these two administrations is $r = .77$ ($n = 138$; $p < .001$). Both sets of results indicate that the CETSCALE is a reliable index of consumers' ethnocentric tendencies.

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[3]The research agency insisted we conceal the identity of the product category and not disclose the exact sample size.

[4]The 10 items are numbers 2, 4, 5, 6, 7, 8, 11, 13, 16, and 17 in Table 1. Personnel at the marketing research agency chose these items purposively and were unwilling to include all 17 items because of questionnaire space limitations.

*Convergent and Discriminant Validation*

Only in the Carolinas study could we assess convergent validity in the true sense of correlating maximally dissimilar measures. The 17-item CETSCALE was correlated with an open-ended measure taken two years prior to the CETSCALE administration ("Please describe your views of whether it is right and appropriate for American consumers to purchase products that are manufactured in foreign countries"). Two coders were in high agreement (93% concurrence) in classifying responses to the open-ended question as reflecting either "ethnocentric" or "nonethnocentric" sentiments. The correlation between the two measures ($r = .54$, $n = 388$, $p < .001$) supports the CETSCALE's convergent validity, especially in view of the fact that there is no shared methods variance between these two time-separated measures.

Discriminant validity evidence is available in all studies except the national consumer good study. The studies incorporated measures of three constructs—patriotism, politicoeconomic conservatism, and dogmatism—that are related intuitively to consumer ethnocentrism. Correlations between consumer ethnocentrism and the related constructs are reported in Table 3.

All correlations between the CETSCALE and its related constructs are high and statistically significant. These correlations do not, however, undermine the CETSCALE's discriminant validity. Consumer ethnocentrism *should* share a moderately high amount of variance with these related constructs, partly because of common methods covariation (all constructs were measured at the same time with the same 7-point Likert-type scales) and also because of true covariation between related con-

struts. We believe that these correlations, though moderately high, do not compromise the CETSCALE's discriminant validity.[5]

*Nomological Validation*

Extensive data have been amassed to examine the effects of consumer ethnocentrism on consumers' foreign-product-related beliefs, attitudes, intentions, and purchase behaviors. Two general predictions frame the subsequent presentation.

$H_1$: Scores on the CETSCALE should be strongly negatively correlated with consumers' beliefs, attitudes, and purchase intentions toward foreign-made products.

$H_2$: Scores on the CETSCALE should be negatively correlated with consumers' foreign-product behavior; however, these correlations should not be as strong as the correlations with behavioral antecedents, because the actual choice between American- and foreign-made products is determined by a variety of factors other than consumer ethnocentric tendencies *per se* (e.g., product availability, price differentials).

*Four-areas study.* The same questionnaire that measured respondents' ethnocentric tendencies also measured their attitudes toward foreign-made products, make of automobile owned (whether foreign or domestic), and make of automobile (foreign or domestic) that would be chosen if the respondent purchased a new car within the next year or so. The automobile was selected as the focal product because its material and media prominence make it the one consumption object of perhaps greatest relevance to the issue of attitudes toward origin of manufacture and the impact of consumer ethnocentrism on those attitudes.

In Table 4 are correlations between the CETSCALE and the various criterion variables. These results support the hypotheses, showing that (1) general attitudes toward foreign-made products are strongly negatively correlated with ethnocentric tendencies and (2) the stronger one's consumer ethnocentrism, the more likely one is to own a domestic-made automobile and/or to intend to purchase a domestic-made automobile.

*Carolinas study.* Of the four studies conducted, this one provides the most complete and rigorous nomological validity evidence. Respondents' ethnocentrism scores were used to *retrodict* a variety of measures adapted from Warshaw (1980), Fishbein and Ajzen (1975), and Ajzen and Fishbein (1980) that had been taken *two years before*

### Table 3
#### DISCRIMINANT VALIDITY EVIDENCE[a]

|  | Patriotism[b] | | Politico-economic conservatism[c] | | Dogmatism[d] | |
|---|---|---|---|---|---|---|
|  | r | n | r | n | r | n |
| Four-areas study |  |  |  |  |  |  |
| Detroit | .65 | 293 | .59 | 295 | NA | |
| Denver | .66 | 297 | .53 | 296 | NA | |
| Los Angeles | .66 | 286 | .44 | 288 | NA | |
| Carolinas | .57 | 536 | .52 | 535 | NA | |
| Carolinas study | .55 | 390 | .51 | 390 | NA | |
| Crafted-with-pride study | .39 | 137 | .40 | 138 | .40 | 134 |

[a]Pearson correlations between the CETSCALE and three intuitively related constructs. All correlations are significant at $\alpha = .01$.

[b]Patriotism was measured by a 5-item purified version of Adorno et al.'s (1950) patriotism scale. Coefficient alpha for this scale ranges from .58 to .69 across the various geographic locales and different studies.

[c]Politicoeconomic conservatism was measured by a 6-item purified version of Adorno et al.'s (1950) politicoeconomic subscale. Coefficient alpha for this scale ranges from .64 to .80 across the various geographic locales and different studies.

[d]Dogmatism was measured by a 20-item scale (Robinson and Shaver 1973, p. 435–36). Its coefficient alpha is .74.

[5]Fornell and Larcker (1981, p. 46) propose that discriminant validity is evidenced when the average variance extracted by each of two constructs is greater than their shared variance. This test applied to our data consistently supports the consumer ethnocentrism concept's discriminant validity. For example, for just the four-areas data, the average variances extracted by the CETSCALE and Adorno et al.'s (1950) politicoeconomic conservatism measure are 71% and 62%, respectively, whereas the shared variance between the two constructs is 35%. Similar results obtain for the remaining tests.

## Table 4
### NOMOLOGICAL VALIDITY EVIDENCE FROM FOUR-AREAS STUDY[a]

| | Attitudes toward foreign-made products[b] | | Automobile ownership[c] | | Purchase intents[d] | |
|---|---|---|---|---|---|---|
| | r | n | r | n | r | n |
| Detroit | −.65 | 292 | .22 | 280 | .20 | 278 |
| Denver | −.67 | 297 | .45 | 290 | .44 | 276 |
| Los Angeles | −.62 | 290 | .41 | 282 | .50 | 267 |
| Carolinas | −.64 | 531 | .31 | 533 | .40 | 514 |

[a]Pearson correlations between the CETSCALE and three theoretically related constructs. All correlations are significant at $\alpha < .01$.

[b]Measured with single-item 11-point scale (0 = very unfavorable feelings toward personally buying and using foreign-made products, 11 = very favorable feelings).

[c]Response coded 1 for household ownership of American-made vehicle(s) only and 0 for ownership of one or more foreign-made vehicles.

[d]Measured with question: "If you were to purchase a new automobile within the next year or so, what makes/models would you seriously consider purchasing?" Listing an American-made automobile as the first choice was coded 1 and listing a foreign-made make first was coded 0.

respondents completed the CETSCALE. Results are reported in Table 5, which also provides a priori predictions about the expected significance and magnitude of correlations.

The first set of findings involves various measures of intentions to purchase automobiles. $BI_Y$, $BI_y$, and $BI_{y/Y}$ are Warshaw measures which, operationally in this research, tap consumers' intentions to purchase a new automobile within the next year or so ($BI_Y$), to purchase a foreign-made automobile within the next year or so ($BI_y$), and to purchase a foreign-made automobile within the next year or so given that any new automobile is purchased during that period ($BI_{y/Y}$). The predictions (Table 5) indicate that (1) $BI_Y$ should not be correlated significantly with consumer ethnocentrism (i.e., intentions to purchase an automobile, without regard to origin of manufacture, should not be related to consumer ethnocentrism), (2) $BI_y$ should be weakly negatively correlated with consumer ethnocentrism (i.e., high scorers on the CETSCALE should be somewhat less likely than low scorers to indicate an intent to purchase a foreign-made automobile; however, even low scorers—i.e., nonethnocentrics—may indicate little intent to purchase a foreign-made car within the next year or so because they have no need to purchase any new car model during that period), and (3) $BI_{y/Y}$ should be strongly negatively correlated with consumer ethnocentrism because the question wording carefully conditioned the intent to purchase a foreign-made car on the purchase of a new car during the next year or so.

The correlations in Table 5 ($r = .03$, $-.22$, and $-.42$, respectively, for $BI_Y$, $BI_y$, and $BI_{y/Y}$) show close accord

with the foregoing predictions. The standard Fishbein/Ajzen measure of purchase intention, $BI$, is also strongly negatively correlated with consumer ethnocentrism ($r = -.45$, $p < .001$).

The next four items in Table 5 are adaptations of Warshaw's (1980) general measures of purchase "affordability" and "desirability" and foreign-car-specific measures of those same constructs. The predictions are that (1) the general measures should not correlate with the CETSCALE, because high scorers on the scale (i.e., ethnocentrics) should consider purchasing a new car (any car, without regard to origin of manufacture) no more nor less affordable and desirable than low scorers, but (2) high scorers, because of their general bias against foreign-made products, should regard purchasing a foreign-made car as less desirable and probably less affordable than would low scorers. The four correlations in Table 5 generally support these predictions ($r = -.16$, $-.03$, $-.23$, and $-.37$).

The final set of results is for Fishbein and Ajzen's cognitive structure ($\Sigma b_i e_i$) and attitude ($A_{act}$) measures. Cognitive structure was constructed with separate measures of respondents' beliefs and evaluations pertaining to nine salient characteristics of automobile ownership (fuel economy, payments, dependability, status, safety, quality of workmanship, serviceability, appearance, and engineering innovativeness). $A_{act}$ is the summated score of a 4-item, 7-point semantic differential scale representing respondents' evaluations of how foolish-wise, good-bad, harmful-beneficial, and pleasant-unpleasant it would be to "purchase a foreign-made automobile within

## Table 5
### NOMOLOGICAL VALIDITY EVIDENCE FROM CAROLINAS STUDY

| | r | n | p | Prediction[a] |
|---|---|---|---|---|
| Warshaw measures[b] | | | | |
| $BI_Y$ | .03 | 393 | .247 | No |
| $BI_y$ | −.22 | 392 | .000 | Yes (weak) |
| $BI_{y/Y}$ | −.42 | 391 | .000 | Yes (strong) |
| Affordability of new car | −.16 | 393 | .001 | No |
| Desirability to purchase new car | −.03 | 393 | .306 | No |
| Affordability of foreign car | −.23 | 393 | .000 | Yes (weak) |
| Desirability of foreign car | −.37 | 393 | .000 | Yes (strong) |
| | | | | |
| Fishbein and Ajzen measures[c] | | | | |
| $\Sigma b_i e_i$ | −.31 | 376 | .000 | Yes (strong) |
| $A_{act}$ | −.41 | 371 | .000 | Yes (strong) |
| $BI$ | −.45 | 389 | .000 | Yes (strong) |

[a]These predictions specify the strength and significance of correlations expected a priori between the CETSCALE and the Warshaw and Fishbein/Ajzen variables. A "no" entry means the correlation should be virtually 0, whereas the "yes (weak)" and "yes (strong)" entries predict varying magnitudes of significant correlations.

[b]Measures of Warshaw (1980) variables were taken two years before the CETSCALE items were measured.

[c]Measures of Fishbein and Ajzen variables (cf. Ajzen and Fishbein 1980) were obtained two years before the CETSCALE items were measured.

the next year or so." Cognitive structure ($r = -.31$) and $A_{act}$ ($r = -.41$) are strongly negatively correlated with respondents' scores on the CETSCALE; ethnocentric consumers have predictably less favorable cognitive structures and attitudes toward foreign-made automobiles than do nonethnocentric consumers.

The overall pattern of the foregoing results provides strong support for the nomological validity of the consumer ethnocentrism concept and its measurement via the CETSCALE. The results are particularly gratifying in view of the two-year interval between the measure of ethnocentrism and the other measures, which mitigates the possibility of inflated correlations due to common methods covariation.

*National consumer good study.* A telephone survey provided measures of two criterion variables that were used to validate nomologically the 10-item, reduced-form CETSCALE that was measured with a followup mail questionnaire. The first variable (origin-of-manufacture importance) is a measure of the importance of country of origin in the respondent's purchase decision for his/ her most recent purchase in the product category (1 = not important at all, 5 = very important). The second variable is a set of three indices (USABIAS, EUROBIAS, and ASIABIAS) that were constructed by summing scores based on respondents' evaluations of which manufacturers (United States, European, and Asian) are "best" and which are "worst" on 11 separate product-specific features (price, quality of workmanship, etc.). Indices for each geographic area were constructed by assigning a +1 to, say, USABIAS if American manufacturers were considered best on a particular feature, $-1$ if they were considered worst, and 0 if they were neither best nor worst. Manufacturers in each of the three geographic areas received an index score ranging from $-11$ to $+11$, the higher scores reflecting more favorable evaluations.

The reduced-form measure's nomological validity is supported. Origin of manufacture becomes a predictably more important purchase consideration with increases in CETSCALE scores ($r = .44$, $n = 1,803$, $p < .001$). Higher scorers on the CETSCALE are predictably biased in favor of American manufacturers ($r = .38$, $n = 2279$, $p < .001$) and in opposition to European ($r = -.25$, $n = 2279$, $p < .001$) and Asian ($r = -.11$, $n = 2279$, $p < .001$) manufacturers.

*Crafted-with-pride study.* The respondents completed the 17-item CETSCALE on one administration. Five weeks later they viewed three 30-second crafted-with-pride commercials and responded to various measures of their attitudes and purchase intentions toward American- and foreign-made apparel items. Correlations between the CETSCALE and theoretically related constructs are reported in Table 6. All correlations are predictably strong and significant. Two of the correlations (attitude foreign 1 and general feelings 1) are artificially inflated by being measured contemporaneously with the CETSCALE items; nonetheless, the correlations between the CETSCALE

### Table 6
### NOMOLOGICAL VALIDITY EVIDENCE FROM CRAFTED-WITH-PRIDE STUDY

| Theoretically related variable | r | n | p |
|---|---|---|---|
| Attitudes foreign 1[a] | $-.59$ | 139 | .000 |
| Attitudes foreign 2[a] | $-.44$ | 140 | .000 |
| General feelings 1[b] | $-.69$ | 139 | .000 |
| General feelings 2[b] | $-.45$ | 140 | .000 |
| Attitudes American[c] | .50 | 140 | .000 |
| Intent American[d] | .32 | 138 | .000 |

[a]Attitudes toward foreign-made products were measured both before and after (foreign 1, foreign 2) respondents viewed the crafted-with-pride commercials. Attitudes measured with 3-item semantic differential scale. Coefficient alpha = .92, .90.

[b]General feelings toward foreign-made products were measured both before and after (feelings 1, feelings 2) respondents viewed the campaign. Feelings measured with single 11-point scale (very unfavorable = 0, very favorable = 10).

[c]Attitudes toward buying American-made apparel products were measured after exposure to ads. Attitudes measured with four 7-point Likert-type scales. Coefficient alpha = .81.

[d]Intentions to purchase American-made apparel were measured on three 7-point semantic differential scales after exposure to ads. Coefficient alpha = .84.

and these same items when measured five weeks later (i.e., attitude foreign 2 and general feelings 2) remain large ($r = .44$ and .45) and represent approximately 20% shared variance.

## THE ROLE OF THREAT

The foregoing results support the reliability and validity of the consumer ethnocentrism construct. A remaining issue is whether consumer ethnocentric tendencies operate uniformly across all consumers or whether certain population segments are disproportionately more or less likely to have ethnocentric tendencies. For many individuals, quality of life and economic livelihood are "threatened" by foreign competition.[6] Persons expected to experience the greatest degree of threat are those in low socioeconomic strata (because their jobs are especially displaceable) and residents of geographic areas where foreign competition is particularly acute.

H₃: Consumer ethnocentric tendencies are especially prominent among individuals whose quality of life and economic livelihood are threatened by foreign competition.

The hypothesis was tested with data from the Carolinas study. Socioeconomic status was measured with

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[6]The concept of threat has a theoretical basis in psychological reactance theory (Brehm 1966). Because an unemployed or imminently unemployed individual's quality and way of life are threatened, the individual should be motivated to evaluate more positively the threatened alternative (i.e., "the American way of life" and associated artifacts such as American-made products) and to evaluate less positively the source of threat (i.e., foreign competition) and its associated products.

Hollingshead's two-factor index (Hollingshead 1949) $2\frac{1}{2}$ years before the CETSCALE was administered to the same households. The three major social classes from Hollingshead's index (classes 2, 3, and 4, corresponding roughly to upper-middle, lower-middle, and upper-lower classes) were compared for differences in their CETSCALE scores. Analysis of variance results show significant differences among the three classes ($F = 20.35$, 2/322 d.f., $p < .001$). The upper-lower class is the most ethnocentric (M = 73.63, SD = 24.32), followed by the lower-middle class (M = 64.01, SD = 23.49) and upper-middle class (M = 51.91, SD = 21.74).[7]

A further test of the threat hypothesis involves the relation between CETSCALE scores and age. According to the threat argument, older working-class individuals should manifest particularly strong ethnocentric tendencies because these individuals are especially threatened by the prospects of losing jobs to foreign competitors and being unable to find new ones. In contrast, because middle- and upper-middle-class workers, especially the latter, have relatively more secure jobs, age for these class members should not correlate strongly with CETSCALE scores. In support of the threat hypothesis, computed correlations between CETSCALE scores and ages for the upper-lower, middle, and upper-middle classes are $r = .27$ ($p = .02$), $r = .10$ ($p = .12$), and $r = .04$ ($p = .33$), respectively.[8]

A final test of the hypothesis that threats accentuate consumer ethnocentrism is provided by comparing CETSCALE scores across geographic areas. An analysis of variance reveals significant differences among the four geographic areas ($F = 13.27$, 3/1433 d.f., $p < .001$). The Detroit area, which is arguably the most threatened of the four areas because of the decline in American

manufacturers' share of the domestic automobile market, exhibits the strongest ethnocentric sentiments and is significantly more ethnocentric than any of the other areas. This difference holds even after controlling for the effects of demographic and socioeconomic differences across the geographic areas.[9]

## DISCUSSION

### Theoretical and Research Implications

Sociological phenomena have received insufficient attention from marketing and consumer behavior scholars (cf. Nicosia and Mayer 1976; Sheth 1977). The concept of consumer ethnocentrism and its measurement via the CETSCALE help to close this gap and respond to the plea for domain-specific concepts in marketing and consumer behavior (e.g., Jacoby 1978).

The consumer ethnocentrism concept and the CETSCALE also contribute to the growing body of country-of-origin studies. Though much of the past research in this area is of limited value because of insufficient theoretical underpinnings and methodological deficiencies (cf. Bilkey and Nes 1982; Kaynak and Cavusgil 1983), the insightful recent work of Johansson and colleagues (Erickson, Johansson, and Chao 1984; Johansson, Douglas, and Nonaka 1985) offers justification for additional, more sophisticated investigation of country-of-origin issues. The consumer ethnocentrism concept and the CETSCALE show promise as useful tools for such research. Potential applications include using the CETSCALE as (1) a covariate in experiments that manipulate country-of-origin variables and (2) a predictor variable in correlational studies along with consumer demographic and psychographic measures and other potentially relevant predictors of attitudes, buying intentions, and purchase behavior.

The concept of consumer ethnocentrism can improve understanding of how consumers and corporate buyers compare domestic with foreign-made products and how and why their judgments may be subject to various forms of bias and error (cf. Nisbett and Ross 1980; John, Scott, and Bettman 1986). Highly ethnocentric consumers are probably most prone to biased judgments by being more inclined to accentuate the positive aspects of domestic products and to discount the virtues of foreign-made items.

Various issues related to the developmental foundations of consumer ethnocentrism warrant investigation.

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[7]An anonymous reviewer suggests these results might reflect social desirability bias rather than support for the threat explanation. The underlying argument presumably is that (1) upper-middle-class respondents should be more likely than the other social classes to *disagree* with the CETSCALE items (or at least not to agree as strongly) because they are expected to be cosmopolitan, (2) members of the upper-lower class should be more inclined to *agree* with the CETSCALE items because working-class people are expected to favor socioeconomic positions that benefit the common man, (3) middle-class respondents, by virtue of their middle status, should be somewhat bimodal in their response tendency because expectations for members of this class are relatively less univocal.

To the extent these suppositions hold, and thus support a social desirability explanation rather than the threat explanation, we should observe the distributions of CETSCALE scores to adhere to the following pattern: (1) for the upper-middle class, the distribution should be non-normal and skewed toward low scores, (2) for the upper-lower class, the distribution should be non-normal and skewed toward high scores, and (3) for the middle class, the distribution should be bimodal. The actual distributions do not support this pattern. The distribution for the upper-lower class is skewed toward the high end and deviates from normality (based on a Kolmogorov-Smirnov $D$ test), but the distributions for the middle and upper-middle classes are statistically normal. (Histograms and diagnostic statistics are available upon request.)

[8]We appreciate an anonymous reviewer's suggestion of this test.

[9]Despite the finding that Detroit has the strongest ethnocentric sentiments of all four areas, we found (Table 4) correlations between the CETSCALE and (1) automobile ownership (domestic or foreign-made model) and (2) purchase intent were actually lower for Detroit than the other geographic areas. This apparent anomaly is simply due to the considerably smaller variance in ownership and intention scores for Detroit in comparison with the other areas. Specifically, ownership and intention standard deviations for Detroit are .006 and .297, respectively, whereas the corresponding standard deviations for the other areas are .02 and .438 for the Carolinas, .028 and .473 for Denver, and .03 and .496 for Los Angeles.

The process by which consumer ethnocentric tendencies are socialized is particularly worth examining. Studies are needed to determine how socioeconomic, demographic, geographic, and regional economic factors influence early childhood socialization of consumer ethnocentric values and what role these variables have during adulthood in accentuating ethnocentric tendencies. Related to this work would be further examination of the concept of threat and its influence on consumers' attitudes, buying intentions, and actual purchase behavior toward foreign-made products. The research we report demonstrates that more threatened consumers (i.e., those whose jobs and quality of life are vulnerable to interruption from foreign competition) have the highest scores on the CETSCALE. Additional research is needed to examine correlates of threat other than the geographic and socioeconomic variables examined in our research, to determine how real and perceived threat changes over time, and to evaluate how threat moderates the impact of consumer ethnocentrism on attitudes, intentions, and behavior related to foreign-made products.

*Practical Implications*

The CETSCALE has several potential uses for contemporary marketing managers. Companies could administer the CETSCALE as part of their periodic tracking studies. Study results would reveal how strong ethnocentric tendencies are and whether the use of made-in-America and buy-American themes would be prudent in future promotional campaigns. It would be naïve to expect consumer ethnocentrism alone to provide a meaningful basis for market segmentation. However, if the CETSCALE scores are correlated with actionable segmentation variables (e.g., a combination of demographic and lifestyle variables), marketing communication programs could be directed to those market segments that are accessible via appropriate media vehicles and retail outlets.

An especially exciting application of the CETSCALE is for regional marketing and geographic segmentation. Extensive geographic differences in consumers' lifestyles and purchase behaviors have prompted many companies to develop regional marketing programs that customize marketing mix elements to regional preferences (cf. "Closing in on the Consumer" 1986; Lesser and Hughes 1986; "Marketing's New Look" 1987). The growth of regionalized marketing programs and the increasing availability of research services specializing in geodemographic data collection (e.g., Claritas Corporation's PRIZM and National Decision Systems' VISION; see "Closing in on the Consumer" 1986) suggest that marketing managers would be receptive to administering the CETSCALE and using the results to customize communication programs to different regions. Direct mail advertising, for example, could be used to vary buy-American appeals to suit zip code areas that differ in their response to the CETSCALE. The media selection applications are certainly not limited to direct mail. Regional magazine editions, local newspapers, and spot broadcast advertising also could be customized to the ethnocentric inclinations of specific geographic areas.

The CETSCALE could be of value to retail chains making store location decisions. For example, a chain specializing in imported merchandise could apply the CETSCALE in areas contemplated for new store openings to determine the likelihood that consumers would respond favorably to a store carrying little, if any, American-made merchandise.

Other practical applications for the CETSCALE undoubtedly can be envisioned. Suffice it to say that the scale offers marketing managers a useful tool for better understanding how present and prospective customers feel about purchasing foreign- versus American-made products. Because consumer ethnocentrism, like all aspects of culture in contemporary North America, is probably subject to constant change (McCracken 1986), annual applications of the CETSCALE could reveal the intensity of ethnocentric tendencies in different geographic areas and among different consumer groups. The appropriateness of using buy-American and made-in-the-USA appeals could be ascertained from these results.

The concept of consumer ethnocentrism and its measurement via the CETSCALE are limited to contemporary American society. Whether the scale is applicable to other cultures is entirely problematic at this time. Translating the scale into other languages and testing it in other countries is a needed next step. Future research also should examine whether the scale differentiates the beliefs, attitudes, and purchase behaviors of demographic and socioeconomic groups other than those we tested. For example, it is not known whether the scale is applicable to consumers of high school age and younger or to blacks, Hispanics, and other ethnic groups.

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# Hybrid car purchase intentions: a cross-cultural analysis

*Jason D. Oliver*
East Carolina University, Greenville, North Carolina, USA, and

*Seung-Hee Lee*
School of Fashion Design and Merchandising, Kent State University, Kent, Ohio, USA

## Abstract

**Purpose** – This paper aims to compare US and Korean consumers' intentions to purchase a high involvement, environmentally friendly product: the hybrid car.

**Design/methodology/approach** – The paper examines how social factors and culture shape intentions to purchase a hybrid car using survey data from 1,083 US drivers and 783 Korean drivers.

**Findings** – The paper shows that self-image congruence and propensity to seek information about green products have strong positive relationships with intentions to purchase a hybrid car among consumers from both countries. Perceived social value associated with the consumption of hybrid cars also has a strong positive relationship with intentions to purchase a hybrid car among Korean and, contrary to expectations, US consumers. In contrast, social value associated with green products, in general, has a negative relationship with US consumer hybrid purchase intentions.

**Research limitations/implications** – The use of a web-based survey of drivers regarding hybrid cars may limit the generalizability of the results to other products and countries. Therefore, it is necessary to replicate the results.

**Practical implications** – In light of the results, marketers of hybrid cars in Korea and the USA should consider communicating about the social value of hybrid vehicle adoption and the positive reflection of ownership on the consumer's self-image, focusing on consumers who actively seek information about green products. However, marketers of hybrid cars in the USA limit references to the social value of green products, in general, which may be a turn-off.

**Originality/value** – This paper increases knowledge about the impact of social and cultural factors on decision making regarding hybrid cars.

**Keywords** Consumer behaviour, Green marketing, Decision making, Social values, South Korea, United States of America

**Paper type** Research paper

An executive summary for managers and executive readers can be found at the end of this article.

## Introduction

Environmentally friendly, or green, products are designed to minimize the environmental impact when they are consumed. Green products are interesting to firms because green issues and social responsibility are becoming important to consumers. Generally, a company's efforts toward social responsibility, including environmental sustainability, will lead consumers to give their products more favorable evaluations than products from less responsible organizations (Brown and Dacin, 1997).

Researchers have made several contributions pertaining to the importance of environmental attitudes and behavior, but these studies have been limited to behaviors (e.g. recycling) or to products that typically garner lower consumer involvement. While this research has begun to illuminate green consumption behaviors, more needs to be done across

product categories that are more expensive, reflect more on the consumer's image, have a higher social risk, and/or require more research prior to purchase. It is also important to understand how culture impacts decision making regarding high involvement, environmentally friendly products.

The current study addresses this gap in the literature by examining socially relevant decision making variables that are related to intentions to purchase a high involvement environmentally friendly product, hybrid cars, in a more collectivist country (Korea) and a more individualist country (the USA). In both the USA and Korea, rising gas prices and advocacy for global sustainability have increased the emphasis on environmentally friendly vehicles. Still, amid the highest historical gas prices in the USA in August of 2008, hybrid vehicles only accounted for a little more than 2 percent of all vehicle sales (HybridCars.com, 2008). Therefore, it is important to understand factors that are related to consumer intentions to purchase hybrid vehicles.

The automobile category is expected to be high involvement because automobile choice is relevant to consumer values and is consumed in a riskier, social setting (Corfman, 1991). Purchasing a car involves a significant financial investment. Higher involvement is also generated because automobiles relate to social identity and status, giving decisions about cars a great deal of importance in a social context (Janssen and Jager, 2002). The cross-cultural perspective is motivated by the expectation that the importance of the decision-making variables associated with the consumption of environmentally friendly products will

vary, depending on cultural orientations. It is important to compare the factors that are related to purchase intentions between countries with different participatory systems since global sustainability is an important global issue.

The main objective of this study is to examine the relationship between consumer factors and consumer intentions to purchase a hybrid car. To do this, we analyze the results of a survey of 1,073 drivers from the USA and 783 drivers from Korea. We analyze the relationship between propensity to seek information about green products, congruence of green product consumption with self-image, and social value with hybrid car purchase intentions among US and Korean customers.

## Literature review

### Cultural orientation and green product decision making factors

Understanding how cultural orientations affect the relationship between decision-making factors and intentions to purchase high involvement environmentally friendly products is important because consumers around the world have experienced increases in consumption of power, globalization, megamergers, and new technological communications in international retailing. Many sustainability advocates believe that a collective effort toward global sustainability would be an effective way to influence consumers' values, attitudes, and behaviors. However, cultural differences are likely to affect the way consumers respond to sustainability efforts (e.g. Newell and Green, 1997). Thus, consumer behaviors across countries need to be understood within a cultural context (De Mooij and Hofstede, 2002).

Hofstede' (2001) cultural models have been used as a theoretical foundation by numerous consumer behavior researchers, with much recent work focused upon the individualism/collectivism construct. In individualistic cultures, people prefer a loosely knit social framework in which individuals are expected to focus primarily on the care of self and one's immediate family. Conversely, in collectivistic cultures, people prefer having a tightly knit social framework in which members expect relatives, the clan or other in-groups to look after them. In addition, they tend to subordinate personal goals to in-group goals, to participate in more in-group activities, to be more concerned with in-group interests, and to feel compelled to conform to in-groups. In individualist cultures, the personal identity is more important than social identity, while in collectivist cultures, social identity is more important to people.

Based on Hofstede's five constructs, Asian cultures such as Korea, China and Japan tend to score high in collectivism and power distance and maintain a long-term orientation, but are mixed in terms of masculinity and uncertainty avoidance. Conversely, Western cultures such as the USA tend to score low on uncertainty avoidance and power distance and are generally individualistic and short-term oriented, with mixed scores for masculinity.

Aoyagi-Usui *et al.* (2003) found that there are differences in environmental values between Asian countries and Western countries. While Asian people tend to perceive environmental values as related to traditional concepts, such as respecting parents and family gatherings, Western people tend to think environmental concepts are contrary to traditional values. For example, people in Western cultures such as the USA perceive environmental values as correlated with altruistic values, which are against traditional values. But, people in Asian cultures such as Japan and Thailand think environmental values are related to both traditional and altruistic values. Differences in decision making have been identified among young people from Korea and the USA (Hafstrom *et al.*, 1992). Therefore, it is relevant to examine intentions to purchase hybrid cars among consumers from both Korea and the USA.

### Green information search and hybrid car purchase intentions

One behavior identified by Laroche *et al.* (2001) that affects consumer willingness to pay more for environmentally friendly products was consideration of environmental issues when making purchase decisions. They measured consideration of environmental issues by asking consumers whether they avoid companies that pollute and use non-environmentally friendly packaging when they make purchases. Hybrid cars tend to be more environmentally friendly and more expensive than their less-green counterparts. Therefore, a similar measure is relevant to purchase intentions of hybrid cars.

Although cardboard packaging is not a consideration for hybrid cars, unlike lower involvement products, a hybrid car is likely to involve greater search attributes. In addition, consumers may actively seek knowledge about companies to learn if they have reputation as polluters. Therefore, a related behavior is the consumer's willingness to seek information about the environmental attributes of products they consider purchasing:

*H1.* Seeking green product information is positively related with intentions to purchase a hybrid car.

### Self-image congruence and hybrid car purchase intentions

Another characteristic that is likely to shape a consumer's intentions to purchase a product is whether the use of the product reflects the user's self-image. Self image congruence captures how the consumer feels the product relates to his view of who he is and who he would like to be (Sirgy, 1982). It is related to social value because others can influence the consumer's ideal self, or who they would like to be. Even though others can enhance or shape consumers' views of themselves, a consumer's self-image is an independent predictor of consumption behavior (Bearden *et al.*, 1989). For example, green consumers are willing to pay more for consumer products and services that are consistent with their belief system. Therefore, it is important to investigate how self-image relates to intentions to adopt a high involvement environmentally friendly product. In this context, self-image congruence is expected to have a positive relationship on consumers' intentions to purchase hybrid cars in both the US and the Korean samples:

*H2.* Perceptions that purchasing a hybrid car reflects positively on one's self-image are positively related to one's intentions to purchase a hybrid car.

## Social value and hybrid car purchase intentions

Consumers are often influenced by the consumption patterns of neighbors, co-workers, opinion leaders and other peers. According to Deffuant *et al.* (2005), individuals assign a social value to products, which evolves during their interactions with others and with information. So, individuals who feel a product has a high social value will look for information that helps them evaluate the benefits of purchasing the product. Especially for high involvement products, which often times are symbols of status, luxury, and personal identity, the way others perceive consumer use of products is likely to be an important factor in purchase considerations (Hickie *et al.*, 2005). Therefore, understanding the role of social value in the decision-making process the consumer goes through is really important.

Social value is likely to play a different role in Korea, a more collectivist culture, than it does in the USA, a more individualist culture. For example, De Mooij and Hofstede (2002) applied Hofstede's theory of national culture to food preparation and noted that collectivists spent more time preparing food than individualists because the social meaning of the food's consumption had more importance. Similarly, the national culture is likely to influence the relationship between the social meaning of driving a hybrid vehicle and intentions to purchase one. Therefore, social value is likely to be positively related to purchase intentions in Korea.

Consumers in the USA may respond differently to social value because of their individualistic culture. The theory of psychological reactance suggests that consumers who feel that their actions are being restricted by an unfair, outside force will react to restore their freedom (Brehm, 1966). A common reaction to the threat to freedom is to find ways to restore the freedom, leading to the opposite from the desired action (Pallak and Heller, 1971). The importance of the freedom to make decisions based on individual desires is a key mediator of the effect of reactance (Clee and Wicklund, 1980). Therefore, US consumers are more likely to experience reactance in response to perceptions of social pressure to conform to more environmentally friendly purchase behaviors:

*H3.* Perceptions of the social value associated with purchasing a hybrid car interact with cultural orientation, such that:

*H3a.* The perceived social value associated with owning a hybrid car is positively related to intentions to purchase a hybrid car in collectivist cultural orientations.

*H3b.* The perceived social value associated with owning a hybrid car is negatively related to intentions to purchase a hybrid car in individualist cultural orientations.

## Covariates: emissions self-efficacy, social value associated with owning green products

We control for the effect of consumers' emissions self-efficacy. If consumers feel strongly that they personally can make a difference in emissions by driving a hybrid vehicle, they are likely to have higher intentions to purchase hybrid vehicles. We also control for the social value associated with owning green products, in general. Owning a hybrid vehicle may have different social value from other green products because they cost more than similar, non-hybrid vehicles. In addition, socially prominent television and movie stars have helped make hybrid cars socially relevant in the USA. In Korea, the government has launched a comprehensive effort to increase the consumption of green products, in general. Because Korea is a collectivist society, these efforts may increase the social value of owning any green product, and the effect may not be isolated to the social value associated with owning a hybrid car. Therefore, it is important to separate the effects of social value associated with owning green products in general from the social value associated with owning a hybrid car.

## Methodology

To collect data, a survey questionnaire was developed in English from existing scales (e.g. Bagozzi and Dabholkar, 1994) or adapted for the survey (e.g. items in the context of hybrid cars) and were translated into Korean. The Korean questionnaire was reviewed and discussed by other Koreans to ensure that the translation was clear and understandable. Then, another Korean scholar translated it back into English to establish equivalence of the questionnaire. After pre-tests were conducted using 20 undergraduate students at a large university in Seoul, Korea, a sample was recruited through an online survey sent to panel respondents from across Korea. As a result, 783 Korean drivers responded to the survey in Korean.

Similarly, after a pre-test was conducted using 20 undergraduates at a public university in the USA, a sample was recruited through an online research firm in the USA. As a result, 1,083 drivers from the USA responded to the survey in English. Both samples responded to the questions in Table I by noting their level of agreement with each statement on a seven-point, Likert scale anchored by (1) Disagree and (7) Agree. Selected items, marked with (R), were reverse coded.

## Results

The proposed model and its hypotheses were tested using a partial least squares (PLS) structural model, which allowed us to avoid assumptions regarding multicollinearity that are associated with ordinary least squares regression or structural equation modeling based on covariances. However, we were still able to analyze the structure using latent variables instead of reducing the constructs to average scores.

The first stage of was to analyze the convergent and discriminant validity of the measurement model. The convergent validity of the reflective measures was assessed using Cronbach's alpha, which provides a measure of the internal consistency of the items based on the assumption they are equally weighted. Table I shows that the Cronbach's alphas for each construct reach the minimum standard, 0.70, in both the Korean and the US samples. Discriminant validity was assessed using the latent constructs correlation matrix with the square root of the average variance extracted (AVE) reported along the diagonal. Discriminant validity is satisfied when the off-diagonal elements in the same row and column are lower than the square root of the AVE along the diagonal. Tables II and III show this condition was met for each construct.

The PLS structural model and hypotheses were tested by finding the standardized betas for each construct. To determine the probability the path from each construct to the dependent construct, intentions to purchase a hybrid car, was significant, a bootstrapping procedure was conducted

**Table I** Reliability and convergent validity of the constructs

| | USA | | Korean | |
|---|---|---|---|---|
| | $\alpha$ | AVE | $\alpha$ | AVE |
| *Seeking green product information* | 0.78 | 0.60 | 0.75 | 0.57 |
| I am interested in reading *Consumer Reports* articles on green products | | | | |
| I always read green product labels and consider their ingredients | | | | |
| I understand the environmental harm caused by the products I consume | | | | |
| I know the polluting effects of the products I use | | | | |
| *Self-image effects* | 0.85 | 0.78 | 0.74 | 0.68 |
| Using a hybrid car would have a negative effect on my self-image (R) | | | | |
| Using a hybrid car would say something positive about who I am | | | | |
| Using a hybrid car would say something positive about what I stand for | | | | |
| *Social value of a hybrid car purchase* | 0.84 | 0.67 | 0.74 | 0.63 |
| If I bought a hybrid car, most people who are important to me would disapprove (R) | | | | |
| If I bought a hybrid car, most people who are important to me would appreciate it | | | | |
| If I bought a hybrid car, most people who are important to me would find it desirable | | | | |
| If I bought an environmentally friendly product, most people who are important to me would not support it (R) | | | | |
| *Emissions importance (covariate)* | 0.86 | 0.78 | 0.72 | 0.64 |
| I really do not see how the vehicle emissions affect my everyday life (R) | | | | |
| It is worthless for an individual person to drive a car with lower emissions (R) | | | | |
| Since one person cannot have any effect upon pollution and natural resource problems, it does not make any difference what kind of car I buy (R) | | | | |
| *Social value of green product purchases (covariate)* | 0.81 | 0.73 | 0.70 | 0.63 |
| If I bought an environmentally friendly product, most people who are important to me would disapprove (R) | | | | |
| If I bought an environmentally friendly product, most people who are important to me would appreciate it | | | | |
| If I bought an environmentally friendly product, most people who are important to me would find it desirable | | | | |
| If I bought an environmentally friendly product, most people who are important to me would not support it (R) | | | | |
| *Hybrid purchase intentions* | 0.82 | 0.73 | 0.85 | 0.68 |
| I intend to purchase a hybrid car in the next year | | | | |
| I intend to purchase a hybrid car in the next seven years | | | | |
| When you purchase your next car, how likely are you to purchase a hybrid car? | | | | |

**Table II** Discriminant validity of constructs; latent variable correlations − USA

| | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 1. Emissions self-efficacy | 5.30 | 1.18 | *0.88* | | | | | |
| 2. Willingness to seek green information | 4.61 | 1.04 | 0.41 | *0.77* | | | | |
| 3. Congruence with self-image | 4.84 | 1.09 | 0.52 | 0.45 | *0.88* | | | |
| 4. Social value associated with the purchase of green products, in general | 5.14 | 0.96 | 0.51 | 0.50 | 0.55 | *0.85* | | |
| 5. Social value associated with the purchase of hybrid cars | 5.02 | 1.06 | 0.51 | 0.40 | 0.78 | 0.67 | *0.82* | |
| 6. Hybrid purchase intentions | 3.89 | 1.04 | 0.31 | 0.46 | 0.59 | 0.37 | 0.53 | *0.85* |

**Note:** Square root of average variance explained is in italics on the diagonals

**Table III** Discriminant validity of constructs; latent variable correlations − Korea

| | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 1. Emissions self-efficacy | 5.24 | 1.03 | *0.80* | | | | | |
| 2. Willingness to seek green information | 4.76 | 0.89 | 0.34 | *0.76* | | | | |
| 3. Congruence with self-image | 4.94 | 0.88 | 0.39 | 0.36 | *0.82* | | | |
| 4. Social value associated with the purchase of green products, in general | 4.94 | 0.82 | 0.40 | 0.41 | 0.49 | *0.79* | | |
| 5. Social value associated with the purchase of hybrid cars | 5.04 | 0.94 | 0.45 | 0.30 | 0.69 | 0.50 | *0.83* | |
| 6. Hybrid purchase intentions | 4.86 | 1.00 | 0.35 | 0.39 | 0.62 | 0.41 | 0.64 | *0.81* |

**Note:** Square root of average variance explained is in italics on the diagonals

using 500 subsamples (Chin, 1998). The results of the PLS structural model are shown in Table IV. *H1* suggests there is a positive association between the consumer seeking green product information and the consumer's intentions to purchase a hybrid car. Although the relationship is stronger in the US sample, this path is significant at the $p < 0.001$ level in both the US ($\beta = 0.26$) and the Korean ($\beta = 0.16$) samples. Therefore, the study supports *H1*. *H2* predicts consumers' perceptions that having a hybrid car reflects positively on their self-image will be positively related to consumers' intentions to purchase a hybrid car. Again, the relationship is stronger in the USA ($\beta = 0.40$) sample than the Korean ($\beta = 0.30$) sample, but both relationships are significant ($p < 0.001$). The data also suggest a stronger relationship between self-image and hybrid car purchase intentions than between green information seeking and hybrid car purchase intentions.

*H3* predicts the relationships between perceived social value and the intentions to purchase a hybrid car will depend on the culture in the respondent's home country. *H3* predicted that social value would have a positive effect on consumers in Korea, who are likely to have a more collectivist culture, but a negative effect on consumers in the USA, who might feel peer influence threatens their freedoms based on their individualist culture. However, the relationship between the social value associated with the purchase of a hybrid car was positive and significant in both the Korean ($\beta = 0.38$) and the US ($\beta = 0.20$) samples. In contrast to previous results and in line with cultural theory, there was a stronger relationship between the social value associated with the purchase of a hybrid car and the intentions to purchase a hybrid car in the Korean sample. Thus, *H3* is only partially supported. Social value appears to play a greater role in purchase intentions in the more collectivist culture, but it does not appear to turn off the consumers in the more individualist culture.

The relationship between the covariate, the social value associated with purchasing green products, in general, and the intentions to purchase a hybrid car was negative ($\beta = -0.08$) and significant ($p < 0.05$) in the US sample and non-significant in the Korean sample. This suggest psychological reactance against social value associated with going green may have a negative impact on consumer intentions to purchase a hybrid car, even as the social value of owning a hybrid has a positive impact. This may also indicate the social value associated with owning a hybrid car in the USA is not based entirely on the benefits of hybrid car ownership to the environment.

Finally, although the emissions self-efficacy construct was not significantly related to intentions to purchase a hybrid car in either sample, the $R^2$ of each model indicated over 40 percent of the variance in the model was explained. In the US model, the $R^2$ was 0.41 and in the Korean model, the $R^2$ was 0.49. This indicates that the strong relationship between social value associated with owning a hybrid car and intentions to own a hybrid car, which is the only loading that was stronger in the Korean sample, has a dramatic impact on the variance explained in the Korean sample.

## Discussion

This study examines factors that influence consumers' intentions to buy hybrid cars in US and Korean markets. Based on the literature, we hypothesized that three constructs were related to intentions to by a hybrid vehicle: green information seeking, congruence with self-image, and the social value associated owning a hybrid car. We expected that the effect of social value on hybrid intentions would have a different effect in Korea than in the USA. Specifically, we anticipated that Korean consumers would have a strong, positive relationship between social value associated with hybrid ownership and hybrid purchase intentions while US consumers would have a negative relationship between social value associated with hybrid ownership and hybrid purchase intentions. PLS analysis found support for the hypothesized relationships between hybrid purchase intentions and green information seeking and self-image congruence, respectively. However, the relationship between hybrid purchase intentions and social value associated with owning a hybrid car was positive in both samples. The only negative relationship in the US sample was the relationship between hybrid purchase intentions and the social value of owning green products, in general. This suggests that the social value associated with the direct ownership of a product has a positive influence in both individualist and collectivist cultures.

**Table IV** Partial least squares regression results

| Dependent variable: intentions to purchase a hybrid car | USA Standardized loading | USA Bootleg *t*-score | Probability | Korea Standardized loading | Korea Bootleg *t*-score | Probability |
|---|---|---|---|---|---|---|
| **Willingness to seek green information** | *0.26* | 8.61 (0.03) | <0.001 | *0.16* | 5.23 (0.03) | <0.001 |
| **Congruence with self-image** | *0.40* | 8.53 (0.05) | <0.001 | *0.30* | 5.23 (0.03) | < .001 |
| **Social value associated with the purchase of a hybrid car** | *0.20* | 3.72 (0.05) | <0.001 | *0.38* | 8.64 (.04) | <0.001 |
| **Emissions self-efficacy** | −0.06 | 1.90 (0.03) | 0.06 | 0.02 | 0.41 (0.04) | >0.10 |
| **Social value associated with the purchase of green products, in general** | *−0.08* | 2.10 (0.04) | 0.04 | 0.00 | 0.09 (0.04) | >0.10 |
| | $R^2 = 0.41$ | | | $R^2 = 0.49$ | | |

**Note:** Significant loadings ($p < 0.05$) in italics

The relative strength of the relationships between hybrid purchase intentions and the constructs is notable. US consumers had stronger relationships between green information seeking and hybrid purchase intentions and self-image congruence and hybrid purchase intentions. On the other hand, the Korean consumers had a stronger relationship between the social value associated with owning a hybrid and intentions to own a hybrid. This is consistent with theory regarding collectivist culture. Further, the negative relationship between social value associated with green product ownership in general and hybrid purchase intentions had the lowest significant loading. Therefore, although US consumer reactance to general social pressure to go green is a consideration, it appears to be a weaker driver of behavioral intentions than the social value associated with a specific product's ownership.

The lack of a significant relationship between emissions self-efficacy, or the feeling that an individual can help reduce emissions, and hybrid car purchase intentions is also interesting. Feelings about personal control over emissions have less impact on purchase intentions than social factors. Further, the relationship between hybrid purchase intentions and social value associated with hybrid car ownership was twice as strong as the relationship between purchase intentions and seeking green product information. This suggests that the social drivers are more important than environmental factors in the collectivist countries, even though the environmental factors should have a direct relationship to the common good that earns high value in collectivist cultures.

Given the findings of our study, it is reasonable to conclude that individual decision making is heavily influenced by perceptions related to the self and others. However, to make the findings more objective, future research can include additional factors that would affect hybrid purchase intentions. Future research can also examine other higher involvement environmentally friendly products to see if common patterns emerge. In addition, in-depth interviews with individual consumers can be used to enrich our understanding of what drives their intention. Using an online sample gave us access to large samples from a wide geographic pool in both countries. However, it limited our sample to respondents with access to the internet. Future research can replicate the results to extend their generalizability.

## Managerial implications

Companies that want to maintain or grow their market share need to understand consumer demand for green products and services. Understanding the constructs that relate to consumer intentions to adopt hybrid cars is an important part of knowing how to effectively communicate with consumers. This study gives marketers insights from two different cultures on consumer intentions to purchase a high involvement, environmentally friendly product: the hybrid car.

One implication is that social value associated with product ownership is extremely important in both individualist and collectivist cultures. Marketers should communicate the social value of product ownership using communication channels that feel authentic to consumers. For example, marketers should encourage positive word-of-mouth and develop events among consumers in offline or online communities. These efforts are particularly important in Korea and other collectivist cultures.

Marketers should also identify consumers who seek information about green products. Marketers may not be able to identify specific environmental values in consumers because of response bias and lack of information availability, but their participation in web sites and readership of consumer reports are events marketers can identify in practice. It may seem obvious that consumers who read consumer reports or participate in web chats or blogs related to environmentally friendly products demonstrate both involvement in the social effort and interest in products that support it. However, it is not clear whether good intentions translate into purchase intentions, especially for more expensive products. The results of the current study demonstrate this interest and involvement in green product information relates to purchase intentions for a higher involvement environmentally friendly product, the hybrid car.

Finally, unlike consumers who have a high interest in green products, many consumers may be attracted to higher involvement green products like hybrid cars because of social value that is not related to their own environmental values. The consumer may think purchasing a hybrid car makes them look intelligent because their product choice allows them to save money in the long run. The consumer may want to appear to be similar to movie stars and celebrities who have adopted the product. The consumer may also be attracted with the prestige associated with the higher sticker price on the car.

In short, marketers should understand that whether the culture is individualist or collectivist, the motivations to save the earth might be secondary when it comes to hybrid car purchase intentions. Marketers should design their communications, and their products, accordingly.

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## About the authors

Jason D. Oliver is Assistant Professor of Marketing in the Department of Marketing and Supply Chain Management at East Carolina University. He previously worked with Fidelity Investments, most recently as a Product Manager. His research interests include green marketing/sustainability, behavioral decision making and consumer loyalty. He has an article forthcoming in the *Journal of Advertising*. Jason D. Oliver is the corresponding author and can be contacted at: oliverj@ecu.edu

Seung-Hee Lee is Associate Professor of Merchandising in The Fashion School at Kent State University. She previously worked at Korean University for several years. Her research interests are brand marketing, social responsibility marketing, and cross-cultural study. She has publications in *Advances in Consumer Research*, The *Journal of International Business & Law*, and *Clothing & Textiles Research Journal* as well as in Korean journals.

# Executive summary and implications for managers and executives

*This summary has been provided to allow managers and executives a rapid appreciation of the content of the article. Those with a particular interest in the topic covered may then read the article in toto to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefit of the material present.*

Growing public concern for environmental welfare has further raised expectations that companies should behave in a socially responsible manner. A reward for those that comply is a more favorable reaction to their products compared to offerings from organizations perceived as less responsible.

One consequence of globalization is an increased worldwide awareness of green issues, prompting firm belief that global sustainability demands a collective effort. Many scholars have nevertheless pointed out the likelihood that cultural differences will shape consumer response to sustainability concerns.

### Key factors to consider

Seminal research in 2001 generated models that have since been widely utilized for research exploring consumer behavior within different cultural contexts. Much of this work has assumed a dichotomy between individualistic and collectivist cultures. The former is characterized by a considerable emphasis on the self and one's immediate family, with responsibility to wider society being distinctly subordinate to these interests. In contrast, social identity is paramount within collectivist cultures and is deemed more important than personal identity. Individuals are expected to put group interests before their own in such societies.

Western cultures are commonly regarded as individualistic and the USA is often cited as a prime example. In contrast, China, Japan, Korea and other Asian cultures tend to be more collectivist in nature. According to some researchers, Western societies and Asian societies differ in their perception of environmental values. People in the West tend to associate environmental values with altruism, whereas environmental concerns are typically correlated with traditional values by their Asian counterparts. However, there is some suggestion that certain Asian cultures relate environmental values to both traditional and altruistic values.

Scholars have identified various factors that can impact on their decision to purchase ecologically-friendly products such as:

- Willingness to search for information about the environmental performance of companies and their products.
- How closely a product reflects the user's real or ideal self-image. This aspect is considered a key "independent predictor" of how a consumer might behave. In this context, pro-environmentalist seek products and services that correspond with their value systems and are usually willing to pay higher prices for such purchases.
- The social value it affords them. Individual concern with how they are perceived by others means that purchase decisions are often influenced by peer groups that might include friends, neighbors, work colleagues and opinion leaders. Certain products are linked to status, luxury and personal identity and may be consumed by people eager to

preserve or enhance their social standing. The supposition is that social value will be more significant within collectivist cultures where attaining a favorable public image is considered paramount. Western consumers, on the other hand, can see pressures to confirm to social expectations as a threat to their individuality. Many will react by engaging in behaviors that are contrary to what is socially desired.

- Whether individuals feel that their personal actions can make a real difference.

### Research and findings

In order to explore these factors, Oliver and Lee conducted an online survey of undergraduate students from universities in South Korea and the USA. Respective samples of 783 and 1,083 were obtained from the two institutions. The countries were deliberately chosen in order to enable comparison between collectivist and individualistic cultures.

Participants were asked to respond to questions designed to identify which aspects would influence their willingness to purchase a hybrid car. This product was selected because of pressure to increase the number of eco-friendly vehicles to support sustainability efforts. Likewise, an automobile is considered a high involvement purchase due to the significant financial outlay and the product's impact on status and social identity.

The survey indicated:

- That consumers who seek information about green products are likelier to purchase a hybrid car. This was statistically significant with both samples but stronger among US participants.
- Positive relations exist between self-image and intentions to purchase a hybrid car. Again the relationship was stronger for the US sample but also significant in the Korean sample.
- Self-image has a stronger influence on hybrid car purchase intentions than does green information seeking.
- The influence of social value on purchase intentions was positive and strong in both cultures.
- Social value associated with buying green products in general negatively influenced intentions to purchase hybrid vehicles. The result was significant in the US sample but not among Korean respondents.

In addition, no substantial relationship was found in either sample to suggest that belief in personal ability to reduce emission levels will increase intentions to buy hybrid cars.

It was anticipated that culture would moderate the impact of social value on hybrid car purchase intentions. Although the effect was stronger in the Korean sample, the predicted negative impact on American participants did not materialize. The authors believe that this finding indicate that "direct ownership of a product" has positive social value in both cultural settings.

That neither green product buying in general nor belief that personal behavior can help lower emission levels positively influenced purchase intentions is also significant. Oliver and Lee propose that social factors are possibly more influential than environmental factors in both cultures. This is arguably surprising in collectivist cultures given the close association between environmental factors and the "common good" that is valued highly where such beliefs prevail.

### Suggestions for marketing and additional study

Given these indications, companies are urged to emphasize the social value of product ownership within their marketing messages. Relevant communication channels should be used to target both online or offline communities and encourage positive word-of-mouth endorsements. Such strategies are seen as especially pertinent within collectivist cultures like Korea.

For high value purchases like hybrid cars, factors that include providing value for money in the long term or satisfying a desire to emulate celebrity owners of such products may be more influential than pro-environmental beliefs. Marketers must therefore include appropriate emphasis.

Consumers who seek green product information are another potential segment and can perhaps be identified by their involvement with specific websites or consumer reports. But marketers are warned that "good intentions" may not necessarily influence purchase behavior, especially where more expensive products are concerned.

Future study could aim to identify additional factors that may influence purchase intentions, while investigating other high involvement green products might reveal common associations. The authors also suggest conducting individual interviews with consumers to further identify their motivations. Confining the present study to respondents with internet access is acknowledged as a possible limitation.

*(A précis of the article "Hybrid car purchase intentions: a cross-cultural analysis". Supplied by Marketing Consultants for Emerald.)*

# Papers

# Examination of environmental beliefs and its impact on the influence of price, quality and demographic characteristics with respect to green purchase intention

**Clare D'Souza**
is a senior lecturer in the Business School at La Trobe University, Australia. Her key research interests include environmental marketing with special interest in social implications of corporate marketing decisions, and green products marketing communication. She can be contacted at cdsouza@latrobe.edu.au

**Mehdi Taghian**
is a senior lecturer in International Marketing at Deakin University, Australia. His key research interests include environmental marketing, marketing audit and marketing strategy.

**Rajiv Khosla**
is an associate professor at the School of Business, La Trobe University, Australia. He has a multidisciplinary background in management, engineering and computer science. His key research interests include management information systems and cognitive models. He can be contacted at R.Khosla@latrobe.edu.au

**Abstract** Research indicates that the environment has had a definite impact on consumer behaviour whereby suggesting to target consumers according to their environmental beliefs. This study investigated the consumers' green purchase behaviour using price and quality attributes as contributors to the formation of purchase intention. It attempts to construct a model that may facilitate the better understanding of green consumers' market segments through the use of an intelligent soft computing model. The model is designed to incorporate knowledge, beliefs, demographic profiles and situational variables. This potentially provides a more direct method for companies to gauge consumers' intention to purchase green products. The results showed strong preference for companies to place higher priority on reducing pollution than on increasing profitability. It highlighted different clusters that demonstrate various levels of the strength of intention to purchase and market segment profiles.

## INTRODUCTION

The publicity given to the Kyoto protocol in Australia and the increasing greenhouse emissions reported in the mass media in recent times have emphasised that businesses require being more socially responsible. Manufacturers, motivated by the achievement of their organisational objectives, have initiated development and modification of some production processes in order to support environmental protection. With increased

**Correspondence:** Mehdi Taghian, Deakin Business School, Deakin University, Toorak Campus, 336 Glenferrie Road, Malvern Victoria 3144, Australia.
Tel: 613 9244 5053;
Fax: 613 9244 5533;
E-mail: mehdi.taghian@deakin.edu.au

stakeholder demands, especially consumer pressure on protection of the environment, businesses have moved beyond simply addressing environmental regulatory issues and are introducing alternatives such as new products that are classified as green.[1] Some business have developed packaging that is environmentally friendly or supporting cause-related promotions.

However, at present, businesses find it difficult to predict consumers' reaction towards green products with a degree of accuracy that is necessary to enable the development of new targeting and segmenting strategies. This presumably has contributed to the failure in green products development. The key issue lies in an understanding of green consumers and their characteristics.

Other issues that have increasingly led to the slow development of green products are strategic issues initiated by businesses, such as charging higher prices or constraints on quality measures for green products.

In this paper, we attempt to investigate and detail the design of a soft computing model using Kohonen's LVQ technique for predicting the consumers' purchase intention of green products. It suggests characterising green market segments using price and quality dimensions as bases for segmentation. By evaluating the profile of a green consumer, it is anticipated that a more practical understanding of progress towards green measures can be achieved by businesses.

## BACKGROUND RELATED TO ENVIRONMENTAL MARKETING RESEARCH

There are a few ways by which a green product can be distinguished. Green products have to represent a significant achievement in reducing environmental impact; they may also have to incorporate strategies of recycling, recycled content, reduced packaging or using less toxic materials.[2]

While there has been much talk about corporations turning towards sustainability and becoming environmentally friendly (Wasik,[3] Bennett,[4] Drumwright,[5] Sheth and Parvartiyar[6]) many efforts have been made to define green

consumers (Benett,[7] Brown and Wahlers,[8] Dagnoli[9]), with conflicting results. It has been suggested that consumers' green preferences may be better appreciated within the context of a holistic social interaction rather than in isolation (Peattie,[10] p. 164). Thus, as Wind[11] suggested instead of turning the green market into a set of identified generalisations, it would be more practical for the development of business strategies to investigate consumer modifications in purchase behaviour, in terms of product attributes such as price and quality.

There is evidence to suggest that consumers are price and quality sensitive when it comes to 'buying green'.[12] Other researchers have attempted to identify green consumer's profiles with an intention to characterise green market segments using demographic variables (McKenzie,[13] Roberts,[14] Titterington *et al.*,[15] Brown and Wahlers,[16]) and they have been able to categorise them as being young, well-educated and affluent urban dwellers (Arbuthnot,[17] Weigel[18]). In comparison, Jolibert and Baumgartner[19] found that although green consumers were younger and more highly educated, their green attitude was not income related. Other studies have indicated that environmental concern and behaviour were stronger for persons above 50 years of age (Gallup and Newport,[20] Kohut and Shriver,[21] Lansana,[22] Vining and Ebreo[23]). At the same time, price sensitivity appears to be a factor that is more directly related to income or the established purchase pattern associated with older age groups. Price and quality variations combined may provide the consumer a chance of exercising trade-offs for a purchase decision. Some research clearly indicates that committed environmentalists were more likely to purchase products on their environmental credentials, with price being less of a factor in the purchase decision.[24] In order to explain the impact of price and quality on consumers' green demand, this study attempts to combine those factors with the demographic profiles of consumers forming distinct clusters or market segments, along with their environmental beliefs.

## DESIGNING PREDICTORS OF ENVIRONMENTAL PROFILE ANALYSIS

Unlike other research that examined various social–psychological, behavioural, recycling or attitudinal factors, this research focuses its stand on environmental beliefs, values and knowledge about environmentalism. Reid has concluded that the environment has had a definite impact on consumer behaviour and has identified four segments whereby suggesting to target consumers according to environmental beliefs.[25]

Basically knowledge advocates beliefs and values. Environmental knowledge can be defined 'as a general knowledge of facts, concepts, and relationships concerning the natural environment and its major ecosystems' (Fryxell and Lo,[26] p. 45). Thus, in simple terms, environmental knowledge involves what people know about the environment and the beliefs that they hold about key environmental aspects or impacts.

The theory reveals that consumers who are knowledgeable about the problems of the environment will be motivated towards green purchase.[10] While researchers (Hines *et al.*,[27] Schann and Holzer[28]) found that it was not just knowledge of environmental issues that had an impact on consumer behaviour but also the action strategies that are available to respond to environmental issues.

Although there are problems in measuring environmental knowledge, knowledge forms the basis of environmental awareness and beliefs. Amyx *et al.*[29] found that subjective knowledge was preferred over objective knowledge. Their research indicated that higher levels of subjective knowledge were associated with higher incomes but there was no relationship between higher levels of subjective knowledge and individuals' age, education, gender or home ownership.

Thogerson and Olander[30] suggest that sustainable consumption is influenced by individuals' value-priorities. There is also verification from research conducted by Karp[31] that green consumers were more likely to hold altruistic values. While Chan[32] found that those who shopped regularly for 'green' products and spent more on green products, in comparison to other products, were more likely to score highly on measure of biospherism, which related to a 'man–nature' orientation. Roberts[33] indicated that those who scored highly on his 'Ecologically Conscious Consumer Scale' were more likely to believe in 'limits to growth', a 'spaceship earth' and an 'equality with nature'. This provides further substantiation that those more heavily engaged in eco-centric and bio-spheric values and beliefs are more likely to be green consumers. Thus, having recognised consumer environmental beliefs and values, we would like to identify how these consumers who hold strong beliefs react to price and quality of green products and whether there would be a trade-off?

In order to provide a more meaningful rationalisation, our next concern is to look at demographic profiles. The key issue is that the same purchase can be made based on different motives, and influenced by a combination of several demographic profiles, knowledge, attitudes, past experiences and values.[10]

With regards to demographic profiles, there has been no significant link found between demographic segmentation and green purchase.[34] This could be due to the notion that different groups of people relate to different parts of the environmental agenda.[10] There have been contradictory results of younger and older age groups concerns about environmental issues.[10] There is, however, a belief that environmental concern is directly related to a consumer's level of education.[35] Based on four surveys, Hines *et al.*[36] found no relationship with gender.

## METHOD

### Data collection

A survey research was designed and implemented to collect empirical data enabling the grouping of respondents with respect to their price and product quality attributes of green products. The research instrument used in this study was

structured based on prior qualitative research and the literature review. The instrument was pre-tested and modified to include variables contributing to the customers' formation of the overall perception about environmentally safe products. All measurements were subjective assessments by the respondents using a seven-point Likert-type scale.[37] The sample was randomly drawn from the residential telephone directory of Victoria (Australia) including both metropolitan and regional areas. The questionnaires were administered over a weekend using Quantum Research data collection services. The respondents were the main buyers of food from supermarkets irrespective of gender. A total of 155 questionnaires were completed and were used for data analysis.

The sample selection method using a random telephone dialling was expected to provide a representative sample of the supermarket shoppers' population. No nonresponse rate has been reported as the automatic telephone dialling would select the next call to replace the unsuccessful call.

The selected sample's main characteristics were female (79 per cent), 35–54 years old (49 per cent), married (65 per cent) with children (47 per cent), secondary school educated (60 per cent) and employed (50 per cent). The data were analysed using both descriptive measures and cluster analysis to identify and validate the items contributing to each component in the model developed. The resulting instrument included items to measure customers' product perception of quality and price by using Kohonen's LVQ behaviour prediction agent, which is discussed below.

## Kohonen's LVQ technique

In this section, we describe aspects related to Kohonen's LVQ behaviour prediction agent, used for learning and predicting the fuzzy behavioural categories. Kohonen's self-organising maps are characterised by a drive to model the self-organising and adaptive learning features of the brain. The learning algorithm organises the nodes in the two-dimensional grid into local

neighbourhoods or clusters that act as feature classifiers on the input data. The advantage of developing neighbourhoods is that vectors that are close spatially to the training values will still be classified correctly even though the network has not seen them before, thus providing for generalisation.

Since Kohonen's network is an unsupervised self-organising learning paradigm, Kohonen also introduced a supervised learning technique called Learning Vector Quantisation (LVQ). LVQ method is very useful because it amounts to a method for fine-tuning a trained feature map to optimise its performance in altering circumstances. The basic feature of LVQ method is that we can add new training vectors at typical situations to improve the performance of individual neighbourhoods within the map. This can be achieved by selecting training vector ($x$) with known classification, and presenting them to the network to examine cases of misclassification. Again a best match comparison is performed at each node and the winner is noted ($n_w$) (Beale and Jackson,[38] p. 122).

The LVQ prediction model used in this work is based on the need to develop an incremental learning model of green purchase based on price and quality.

In order to develop a predictive model, we need to determine green consumer cluster groups related to purchase intention. These cluster groups then will become the dependent variable to be predicted by the LVQ technique. In the rest of this section, we first describe the identification of purchase intention cluster groups and then follow it up with the design and implementation of the prediction model.

## LEARNING GREEN CONSUMER CLUSTER GROUPS

The purchase intention of green consumers is broken down into two dimensions or attributes, namely, price and quality of the green products. The price and quality dimensions are assumed to be influenced by beliefs or values and customer characteristic variables. In all, 20 variables or data points (under the above categories) were used to cluster green consumer groups as follows:

## Beliefs/values on environment:

I believe there are a lot of exaggerations about companies taking environmental risks nowadays.
I believe the government is doing all that is possible to safeguard the environment.
I believe that we should not slow down industry progress because of concern for the environment.
I believe environmental safety is the responsibility of the government, not individual citizens.
I believe that government legislation adequately regulates environmental protection.
I believe a well-known brand is always a safe product to buy.
I believe that the quality of environmentally safe products is not as good as other products.
I believe that the price of environmentally safe products is usually more expensive than other products.
I believe Australian companies are generally doing a good job in helping to protect the environment.
I believe companies should place higher priority on reducing pollution than on increasing their own profitability.

I believe companies should place higher priority on reducing pollution than on increasing profitability even if jobs are at risk.

## Situational factors (price and quality) on green products

I prefer to purchase an environmentally safe product even if it is somewhat more expensive.
I prefer to purchase an environmentally safe product even if it is somewhat lower in quality.

In the rest of the paper, we will describe the design of a soft computing model using Kohonen's LVQ technique for predicting the purchase intention of green consumers of green products.

Figure 1 shows a sample of the consumer behavioural patterns used as data set for learning the fuzzy behavioural categories/clusters towards price and quality. Initially ten clusters were obtained for price and 17 clusters obtained for quality. It was found that consumers were more densely clustered on the quality dimension of the product than on price, indicating stronger
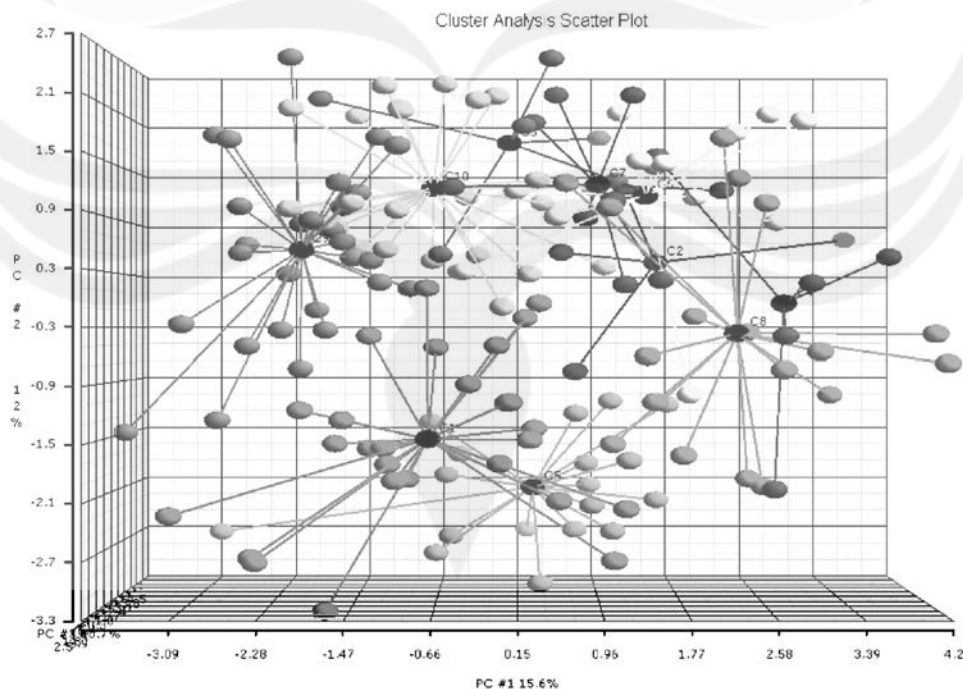


**Figure 1**: Price cluster analysis

resistance to lower quality and relatively more relaxed in terms of higher prices.

Figure 2 shows the clusters based on cognitive, affective, customer characteristics and price/quality variables. Thus, Figure 1 shows 11 price/quality-based clusters. Of these ten price-based clusters are distinct green customer groups whose purchase intentions are influenced by different beliefs, attitudes and demographic characteristics.

Eight of the 11 clusters shown in Figure 2 are plotted on a two-dimensional price and quality
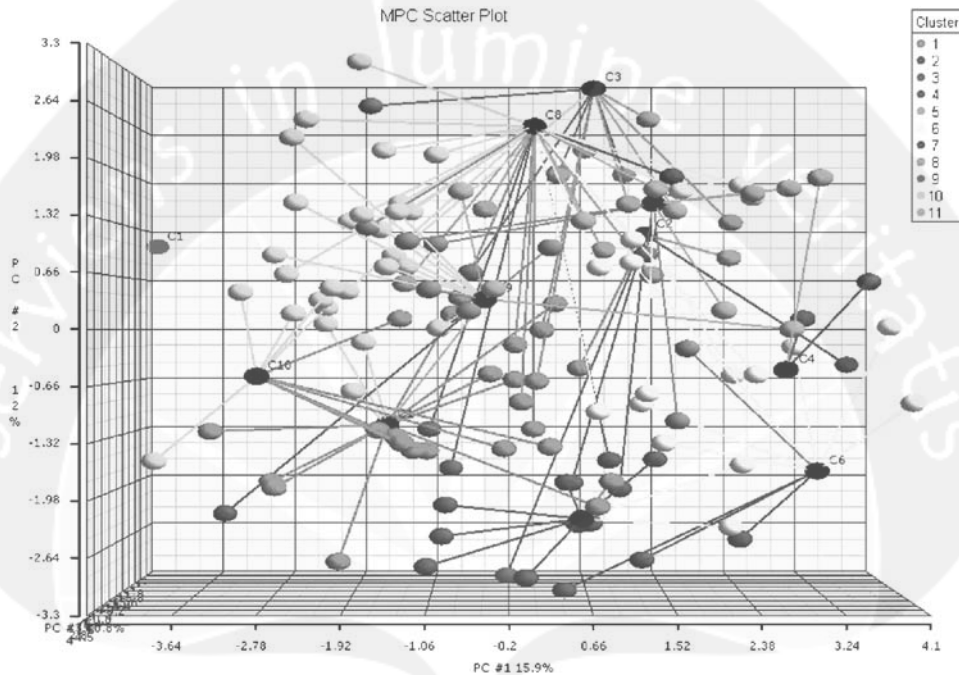


**Figure 2**: Price/quality cluster analysis
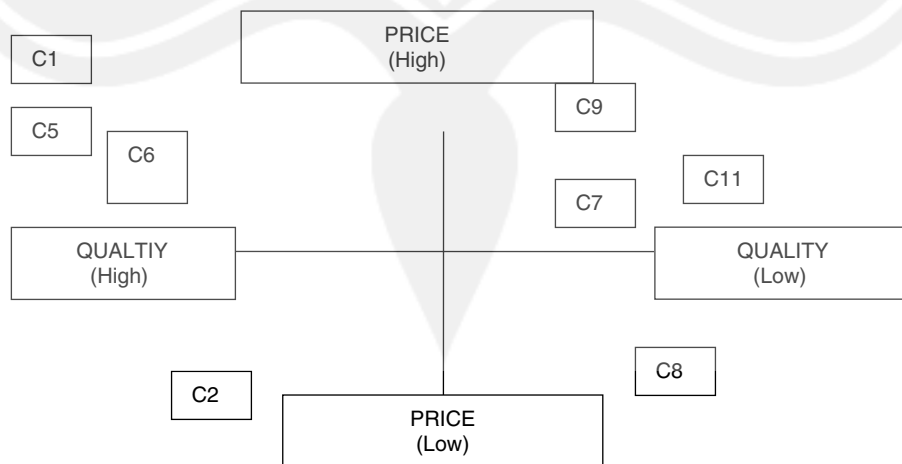


**Figure 3**: Purchase intention clusters and two-dimensional price-quality model

**Table 1:** LVQ based predictive model

| Categories | # per class | # Correct | # Error | % Correct | % Error | Std error |
|---|---|---|---|---|---|---|
| 1 | 26 | 26 | 0 | 100.0 | 0.0 | 0.0 |
| 5 | 11 | 10 | 1 | 90.9 | 9.19 | 8.7 |
| 6 | 17 | 16 | 1 | 94.1 | 5.9 | 7.1 |
| 7 | 19 | 18 | 1 | 94.7 | 5.3 | 5.1 |
| 8 | 11 | 11 | 0 | 100.0 | 0.0 | 0.0 |
| 9 | 3 | 1 | 2 | 33.3 | 66.7 | 10.5 |
| 11 | 1 | 1 | 0 | 100.0 | 0.0 | 4.9 |
| Total | 88 | 83 | 5 | 94.3 | 5.7 | 2.4 |

model in Figure 3. A sample data set used for developing the LVQ-based predictive model is shown in Table 1. As can be seen, we have used only eight out of the 11 purchase intention categories (based on 11 price and quality clusters identified in the preceding section). The three cluster categories, 3, 4 and 10 are not included in Table 1 and in Figure 3 forms the outliers of the two-dimensional price and quality model.

In order to establish the prediction accuracy of the Kohonen's LVQ model, we have used the cross-validation technique for estimating generalisation error based on 're-sampling'.[39] It shows a total accuracy of 94.32 per cent.

# QUADRANT 1 — PRICE (HIGH) AND QUALITY (HIGH)

Quadrant 1 included respondents who formed clusters that would prefer to purchase environmentally safe product if it was somewhat more expensive and were of somewhat higher quality.

## Cluster one

Consumers in cluster one:
— Strongly agreed on their belief that companies should place higher priorities on reducing pollution than on increasing their own profitability.
— Majority of the consumers belonged to an older age group; they had no children and were retired.

## Cluster five

Consumers in cluster five:
— Strongly agreed that there are exaggerations about companies taking environmental risks.
— Consumers disagreed on government legislation adequately regulates environmental protection.
— Consumers strongly agreed that companies should place higher priority on reducing pollution than on increasing their own profitability.
— Most of the consumers were in full time employment and were employed as white collared workers.

## Cluster six

Consumers in cluster six:
— Strongly agreed that we should not slow down industry progress because of concern for the environment.
— Strongly agreed that well-known brand is always a safe product to buy.
— Strongly agreed that the prices of environmentally safe products are usually more expensive than other products.
— Strongly agreed that companies should place higher priority on reducing pollution than on increasing their own profitability.
— Married or in *de facto* relationship, year 10 and under and had no occupation.

While there is a variation in the demographic profiles, in these three clusters all consumers strongly agreed that companies should place higher priority on reducing pollution than on increasing their own profitability.

## QUADRANT II — PRICE (HIGH) AND QUALITY (LOW)

Quadrant II included consumers who formed clusters that would prefer to purchase environmentally safe products if they had somewhat higher prices and were somewhat of lower quality in comparison to the alternative products.

### Cluster seven

Consumers in cluster seven:
— Strongly disagreed that the government is doing all that is possible to safeguard the environment.
— Consumers agreed that companies should place higher priority on reducing pollution than on increasing their own profitability.
— Single, living alone, completed Higher Secondary, retired.

### Cluster nine

Consumers in cluster nine:
— Strongly agreed that we should not slow down industry progress because of concerns for the environment.
— Strongly agreed that companies should place higher priority on reducing pollution than on increasing their own profitability.
— No children.

### Cluster eleven

Consumers in cluster eleven:
— Disagreed that the quality of environmentally safe products are not as good as other products.
— Agreed that Australian companies are generally doing a good job in helping to protect the environment.
— Strongly agreed that companies should place higher priority on reducing pollution than on increasing their own profitability.
— Married *de facto* — and no occupation.

In this quadrant as well, while there is a variation in the demographic profiles, in these three clusters all consumers, strongly agreed that companies should place higher priority on reducing pollution than on increasing their own profitability.

## QUADRANT III PRICE LOW/ QUALITY LOW

Quadrant III includes consumers who formed clusters that would prefer to purchase environmentally safe product if it was somewhat lower in price and were somewhat lower in quality in comparison to the alternative products.

### Cluster eight

Consumers in cluster eight:
— Neither agreed nor disagreed that the government legislation adequately regulates environmental protection.
— Married/*de facto*.

## QUADRANT IV PRICE (LOW) AND QUALITY (HIGH)

Quadrant IV included consumers who formed clusters that would prefer to purchase environmentally safe product if it was somewhat lower in price and was of higher quality in comparison to the alternative products.

### Cluster two

Consumers in cluster two:
— Strongly agreed that we should not slow down industry progress because of concern for the environment.
— Consumers in this group had completed higher secondary education and had no occupation.

The larger number of clusters fell in quadrant I Price High/Quality High and quadrant II Price High/Quality Low.

In both these quadrants, the research indicated that all clusters showed strong preference for companies to place higher priority on reducing pollution than on increasing their own profitability.

## MANAGERIAL IMPLICATIONS

Peattie[10] indicated that if the majority of consumers were offered credible green products with similar prices and technical performance to conventional products, consumers would discriminate in favour of the green products. Thus, for marketers of green products, the challenge lies in how to identify environmental beliefs and values consumers hold about green products in order to target them. For those consumers who do not currently purchase green products, the question is whether and how they can be motivated to become potential green consumers.

The present study has found evidence to suggest that there appears to be a fundamental expectation existing on the part of the customer about all products to be green and friendly to the environment. From the cluster analysis, it can be explained that consumer attitude appears to be that they are less likely to compromise on product quality than on somewhat higher prices of green products. Thus with respect to business strategy, arguably, this may mean two things: (1) manufacturers may produce higher quality green products and use the premium pricing strategy commensurate with the higher costs of production or (2) they may compete in the marketplace offering comparable product quality standards at the competitive price categories in the market. The second option may require investment in refining production processes and employing technology more effectively to create lower cost-based production processes.

It can be seen that buying intent for green products is also associated with customer's personal characteristics. Consumer demographics play a role in cluster analysis. In essence, to target these markets effectively, managers may benefit from segmenting the market based on consumer's green demographic profile. Further research could investigate this issue more fully.

For those companies that intend to use the green product offering as a competitive advantage, it appears to be fundamental to segment their markets based on the three combined dimensions of price/quality/demographic characteristics and be able to quantify each segment for their attractiveness and purchase readiness.

Keller[40] has identified ten top traits for the world's strongest brands. In order to build up a strong green brand, there appears to be a need for consideration of a pricing strategy in line with consumers' perception and strength of attitude toward value and specifically about green values. Therefore, for environmental marketers pricing may involve a three-way balance between price, eco-performance and primary performance to create a green value strategy.[10]

A fundamental issue is whether green consumers can be targeted. This study suggests that those consumers whose beliefs extend positively towards the environment, potentially, demonstrate a relatively consistent response format and commonality of intention to purchase. Therefore, this target market may be attractive and could, potentially, be served using a well-structured and formulated environmental marketing strategy and consistent implementation.

## CONCLUSIONS

In summary, the understanding of the green products perception formation, potentially, has a number of applications. The analysis provides the motivations for management (1) to build a strong competitive advantage for the product, in terms of quality and price, (2) to develop and project a profile of green consumer based on demographics and (3) to meet customers' expectations by genuinely being as well as effectively being recognised by consumers as being demonstrably socially responsible. This strategy may offer the potential benefits of improvement in market share and assist to achieve sustainable longer term profitability.

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