Purchasing factor of Shock absorber online

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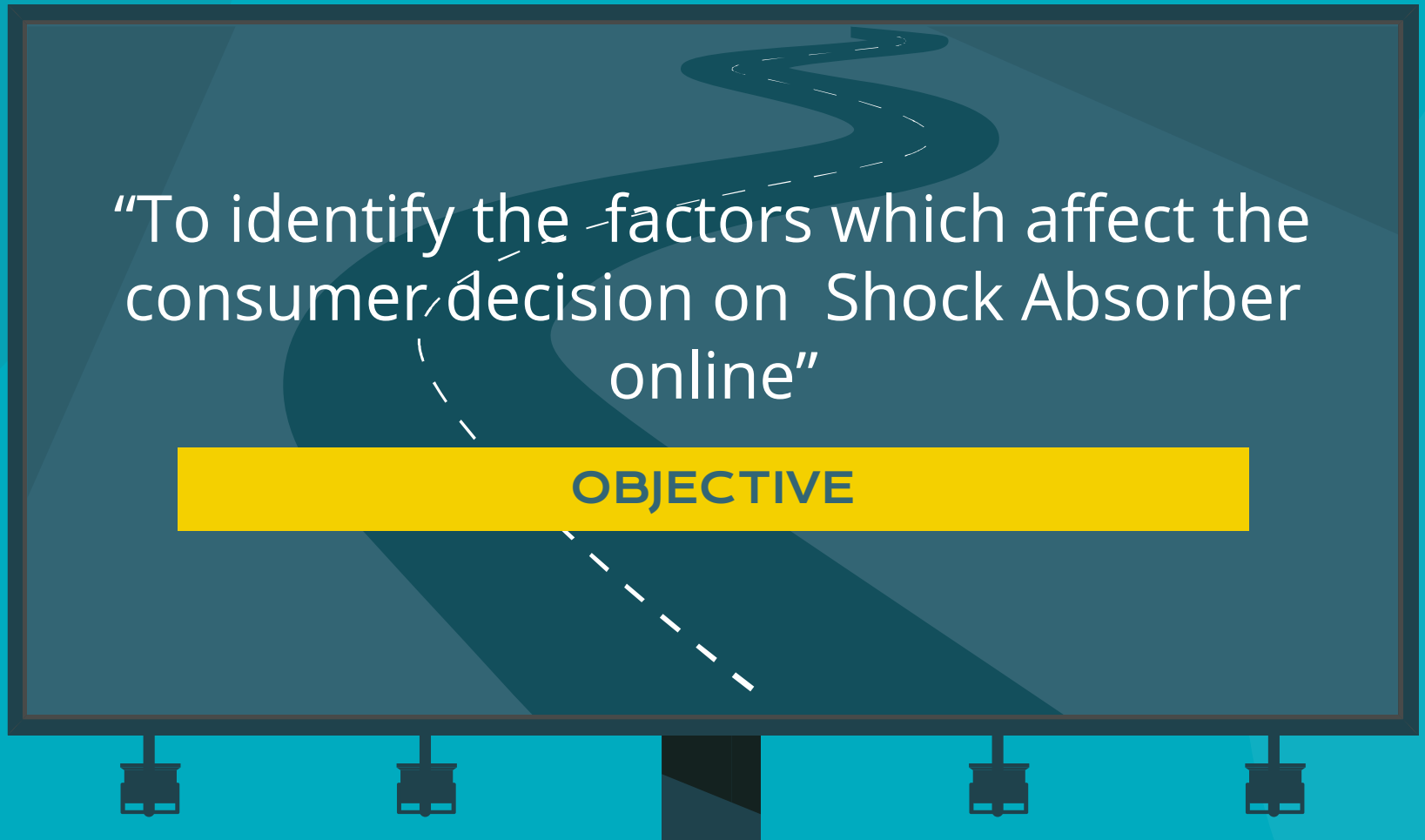

“To identify the factors which affect the consumer decision on Shock Absorber online”
OBJECTIVE

Research Question

01 What personality of customer are buying online?

02 What are the factors that influenced customer purchasing behavior in Shock Absorber on online Platform?

03 What is the strength and weakness of online platform?

Literature Review

CLASSIFICATION OF THE FACTORS INFLUENCING ONLINE BUYING (DR. K.M. Sarah Uddin)

- Online platform helps the marketers to build relationships with customers (Point, 2016).
- The technological factor is most important factor that helps the consumers to find their desire products (Khan, 2016).

DECISION MAKING INFLUENCING FACTOR IN PURCHASING AUTO PARTS OF CONSUMER IN SRIRACHA DISTRICT(DR. RUJAPA PANG)

- Demographic Segmentation (Panisa, 2548)
- Culture Variable (Terdsuk, 2552)
- Marketing mix factor (Siriwan, 2552)

Literature Review

Factors influencing the consumer purchase decision within e-commerce in emerging markets.(Gustav Hallberg & Sebastian Krysén)

- Web site design having an positive impact on customers purchase decision (Martin, 2012)

AN IMPACT OF CUSTOMER BUYING IN DECISION MAKING PROCESS IN PURCHASE OF ELECTRONIC IN CHENNAI (Elixir International journal)

$$\text{Factor Impact on Behavior}_{c,t} = \alpha_0 + \beta_1 \text{Cultural}_{c,t} + \beta_2 \text{Social}_{c,t} + \beta 3 \text{Personal}_{c,t} + \beta_4 \text{Psychological}_{c,t} + \beta 5 \text{Product,t} + \beta_6 \text{Price}_{c,t} + \beta_7 \text{Promotion}_{c,t} + \beta_8 \text{Place}_{c,t} + \varepsilon_{c,t}$$

Theoretical Framework for online purchasing decision

Figure 4: Theoretical framework for online purchase decision

Consumer demographics (Internal factors)*

External online factors*

Functionality factors		Psychological factors	Content factors	
Usability*	**Interactivity***	**Trust***	**Aesthetics***	**Marketing Mix**
Convenience*	Customer service/aftersales*	Transaction security*	Design*	Communication
Site navigation	Interaction with company*	Customer data misuse	Presentation quality*	Product
Information architecture	personnel*	Customer data safety	Design elements	Fulfilment
Ordering/payment process	Customization	Uncertainty reducing	Style/atmosphere*	Price
Search facilities and process	Network effects*	elements*		Promotion
Site speed		Guarantees/return		Characteristics
Findability/accessibility		policies*		

Theoretical (4ps)

01 Price

02 Product

03 Promotion

04 Place

HYPOTHESIS

1

Convenience in aspect of orders and payment is the crucial impact factor.

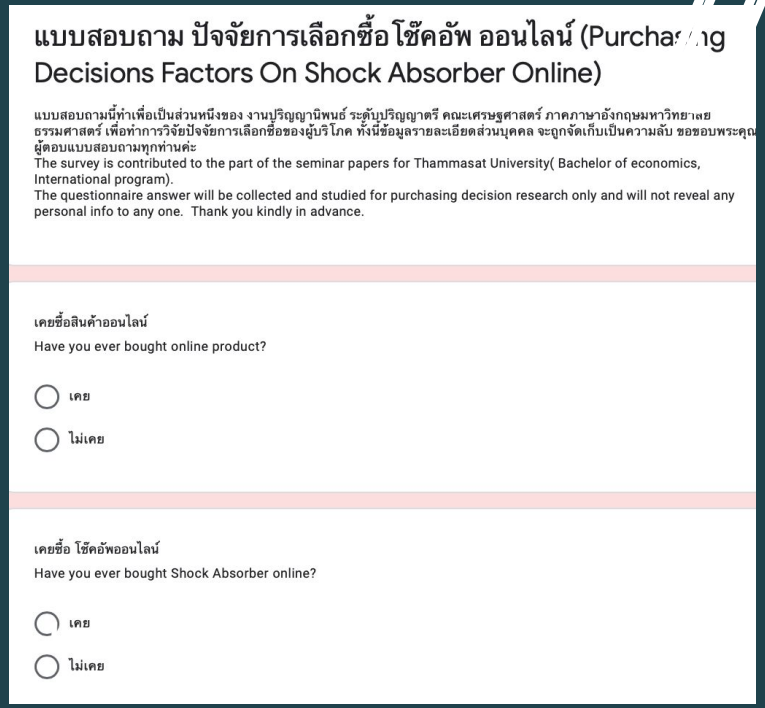
2

Marketing mix is the advantage of online marketing, especially on price factor.

Methodology

Questionnaire

1. Have you ever bought Shock absorber online ?



แบบสอบถาม ปัจจัยการเลือกซื้อโช๊คอัพ ออนไลน์ (Purcha ng Decisions Factors On Shock Absorber Online)

แบบสอบถามนี้ทำเพื่อเป็นส่วนหนึ่งของ งานปริญญานิพนธ์ ระดับปริญญาตรี คณะเศรษฐศาสตร์ ภาคภาษาอังกฤษมหาวิทยาลัย ธรรมศาสตร์ เพื่อทำการวิจัยปัจจัยการเลือกซื้อของผู้บริโภค ทั้งนี้ข้อมูลรายละเอียดส่วนบุคคล จะถูกจัดเก็บเป็นความลับ ขอขอบพระคุณ ผู้ตอบแบบสอบถามทุกท่านค่ะ
The survey is contributed to the part of the seminar papers for Thammasat University(Bachelor of economics, International program).
The questionnaire answer will be collected and studied for purchasing decision research only and will not reveal any personal info to any one. Thank you kindly in advance.

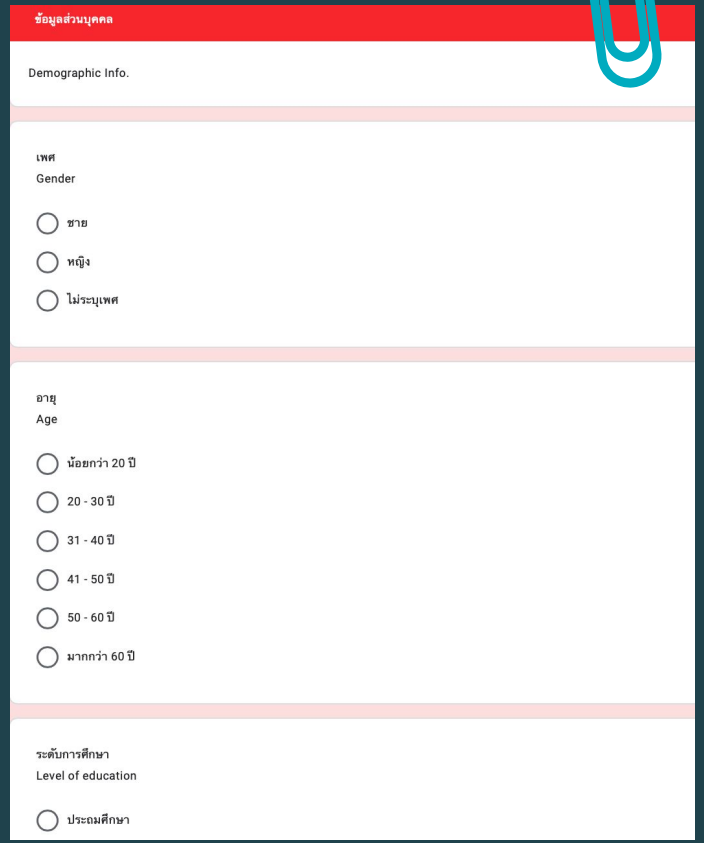
เคยซื้อสินค้าออนไลน์
Have you ever bought online product?

- เคย
- ไม่เคย

เคยซื้อ โช๊คอัพออนไลน์
Have you ever bought Shock Absorber online?

- เคย
- ไม่เคย

2. Demographic Questions



ข้อมูลส่วนบุคคล

Demographic Info.

เพศ
Gender

- ชาย
- หญิง
- ไม่ระบุเพศ

อายุ
Age

- น้อยกว่า 20 ปี
- 20 - 30 ปี
- 31 - 40 ปี
- 41 - 50 ปี
- 50 - 60 ปี
- มากกว่า 60 ปี

ระดับการศึกษา
Level of education

- ประถมศึกษา

3. Put the rate on each question

Start at 1 (Very disagree)

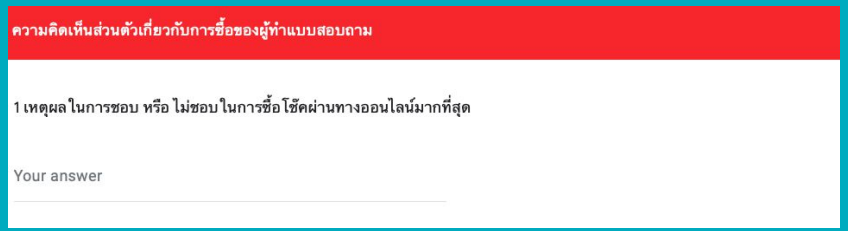
2 (Disagree)

3 (Neutral)

4 (Agree)

5 (Very agree)

4. “Personal comment”



ปัจจัยที่สำคัญในการเลือกซื้อ โช๊คอัพ ออนไลน์

แสดงความคิดเห็นในแต่ละหัวข้อของการซื้อโช๊คอัพ ออนไลน์ วัดระดับจากเห็นด้วยมากที่สุดไปถึงเห็นด้วยน้อยที่สุด (5-1)

Usability

	เห็นด้วยมากที่สุด	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยเป็นอย่างมาก
สะดวกสบายในการซื้อ	○	○	○	○	○
สะดวกในการชำระเงิน เช่น เงินสด ปลายทาง ผ่อน หรือ บัตรเครดิต	○	○	○	○	○

Interactivity

	เห็นด้วยมากที่สุด	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยเป็นอย่างมาก
ประทับในบริการหลังการขาย	○	○	○	○	○
เพื่อน ครอบครัว หรือคนรู้จักแนะนำ	○	○	○	○	○

Trust

	เห็นด้วยมากที่สุด	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยเป็นอย่าง...
พึงพอใจกับระยะเวลารับประกันสินค้า	○	○	○	○	○
มีความปลอดภัยในการชำระสินค้า	○	○	○	○	○

Aesthetic

	เห็นด้วยมากที่สุด	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยเป็นอย่างมาก
รูปสินค้าสวย ดึงดูดน่าใช้	○	○	○	○	○
รูปภาพชัด พร้อมบอกข้อมูลที่ชัดเจน	○	○	○	○	○

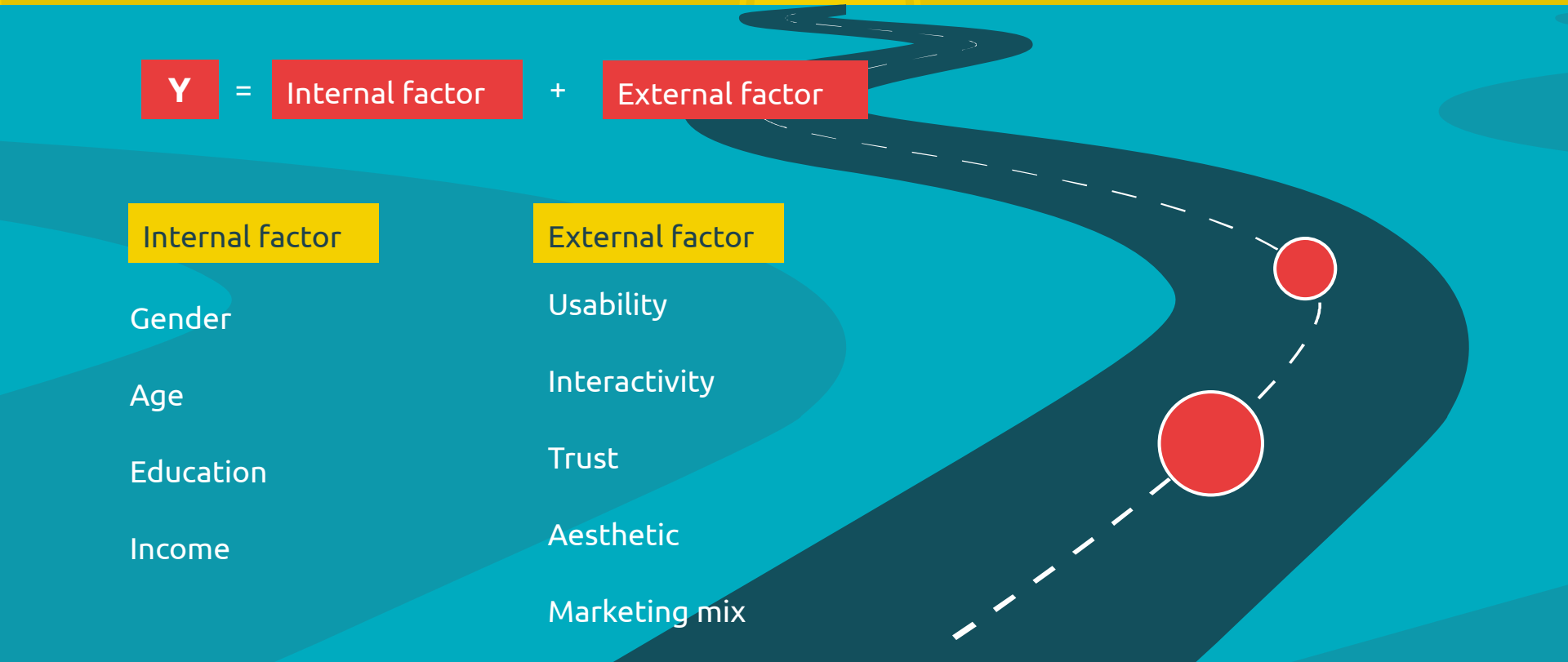
Marketing mix

	เห็นด้วยมากที่สุด	เห็นด้วย	ปานกลาง	ไม่เห็นด้วย	ไม่เห็นด้วยเป็นอย่างมาก
สามารถติดต่อพูดคุยกับร้านค้าได้สะดวก	○	○	○	○	○
ราคาถูกกว่าที่อื่นเช่น อู่หรือร้านอะไหล่	○	○	○	○	○
สินค้าแตกต่าง และหลากหลาย	○	○	○	○	○
มีโปรโมชั่นที่น่าสนใจ	○	○	○	○	○

Model : Logit regression

Y = Internal factor + External factor

Internal factor	External factor
Gender	Usability
Age	Interactivity
Education	Trust
Income	Aesthetic
	Marketing mix



Logit regre

O

Internal factor

```
. logit BOUGHT gender age edu income

Iteration 0:   log likelihood = -128.38629
Iteration 1:   log likelihood = -114.94301
Iteration 2:   log likelihood =   -114.723
Iteration 3:   log likelihood = -114.72268
Iteration 4:   log likelihood = -114.72268

Logistic regression                             Number of obs     =        208
                                                LR chi2(4)        =      27.33
                                                Prob > chi2       =     0.0000
Log likelihood = -114.72268                     Pseudo R2         =     0.1064

------------------------------------------------------------------------------
      BOUGHT |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      gender |   -.9769936   .3388517    -2.88   0.004    -1.641131   -.3128564
         age |    .4090914   .1434635     2.85   0.004     .127908    .6902748
         edu |    .3887626   .1817545     2.14   0.032     .0325304   .7449948
      income |    -.255084   .1274558    -2.00   0.045    -.5048927   -.0052753
       _cons |   -1.993578    .737837    -2.70   0.007    -3.439712   -.5474438
------------------------------------------------------------------------------

. mfx

Marginal effects after logit
      y  = Pr(BOUGHT) (predict)
         =  .28606221
------------------------------------------------------------------------------
variable |      dy/dx   Std. Err.      z    P>|z|  [    95% C.I.   ]       X
---------+--------------------------------------------------------------------
 gender* |   -.1973541     .06603    -2.99   0.003  -.326771 -.067937   .495192
     age |     .083549     .02928     2.85   0.004   .026158   .14094   2.77885
     edu |    .0793972     .03717     2.14   0.033   .006545   .15225   3.26923
  income |   -.052096      .02591    -2.01   0.044   -.10288 -.001312    3.3125
------------------------------------------------------------------------------
(*) dy/dx is for discrete change of dummy variable from 0 to 1
```

Logit regression

01

External Factor

Y(purchased shock absorber online)= Usability factor(convenience orders + Convenience Payment)+ Interactivity factor (Great Consumer service +Network affect)+ Trust factor (Guarantee + Transaction security) +Aesthetic factor (Design +Presentation Quality)+ marketing mix factor(Communication+Price+Product+ Promotion)+error term.

```
. logit BOUGHT conorders conpayment service network guaran transecur design presentqua commu price apromo
> tion product

Iteration 0:   log likelihood = -128.38629
Iteration 1:   log likelihood = -113.82411
Iteration 2:   log likelihood = -113.52801
Iteration 3:   log likelihood = -113.52771
Iteration 4:   log likelihood = -113.52771

Logistic regression                               Number of obs     =        208
                                                  LR chi2(12)       =      29.72
                                                  Prob > chi2       =     0.0031
Log likelihood = -113.52771                       Pseudo R2         =     0.1157
```

BOUGHT	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
conorders	.2340775	.2988888	0.78	0.434	-.3517338	.8198887
conpayment	-.3548473	.303257	-1.17	0.242	-.9492201	.2395255
service	-.1593257	.2190968	-0.73	0.467	-.5887475	.2700961
network	-.670556	.2537994	-2.64	0.008	-1.167994	-.1731183
guaran	.0844752	.2742275	0.31	0.758	-.4530007	.6219512
transecur	-.8298066	.263313	-3.15	0.002	-1.345891	-.3137227
design	.4775264	.2871995	1.66	0.096	-.0853743	1.040427
presentqua	.5651895	.3223696	1.75	0.080	-.0666433	1.197022
commu	.1103375	.2291847	0.48	0.630	-.3388563	.5595313
price	-.179569	.2908179	-0.62	0.537	-.7495616	.3904236
apromotion	.2546581	.2749297	0.93	0.354	-.2841941	.7935104
product	.2705005	.2745673	0.99	0.325	-.2676414	.8086425
_cons	-.4679981	1.446699	-0.32	0.746	-3.303476	2.367479

```
. mfx

Marginal effects after logit
      y  = Pr(BOUGHT) (predict)
         =  .28357375
```

variable	dy/dx	Std. Err.	z	P>|z|	[95% C.I.]		X
conord~s	.0475551	.0606	0.78	0.433	-.071212	.166322	4.28365
conpay~t	-.0720907	.06156	-1.17	0.242	-.192743	.048562	4.17788
service	-.0323686	.04449	-0.73	0.467	-.119567	.05483	3.89904
network	-.1362299	.05112	-2.67	0.008	-.236419	-.036041	3.82692
guaran	.017162	.05574	0.31	0.758	-.092095	.126419	4.19712

Logit regression

02

Purchasing shock absorber =
External Factor+Internal Factor

```
. logit BOUGHT gender age edu income conorders conpayment service network guaran design transecur present
> qua commu price product apromotion

Iteration 0:   log likelihood = -128.38629
Iteration 1:   log likelihood = -100.68787
Iteration 2:   log likelihood = -99.202712
Iteration 3:   log likelihood = -99.195265
Iteration 4:   log likelihood = -99.195265

Logistic regression                             Number of obs     =        208
                                                LR chi2(16)       =      58.38
                                                Prob > chi2       =     0.0000
Log likelihood = -99.195265                     Pseudo R2         =     0.2274

------------------------------------------------------------------------------
      BOUGHT |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      gender |  -1.292584   .4377184    -2.95   0.003    -2.150496   -.4346716
         age |   .4805991   .1872168     2.57   0.010     .1136609    .8475373
         edu |   .5593577   .2141468     2.61   0.009     .1396378    .9790776
      income |  -.3403131   .1551715    -2.19   0.028    -.6444437   -.0361825
  conorders |   .5816821   .3541221     1.64   0.100    -.1123844    1.275749
  conpayment |  -.8892879   .3873569    -2.30   0.022    -1.648493   -.1300825
     service |  -.1877343   .2343728    -0.80   0.423    -.6470966    .2716281
     network |  -.7692236    .291125    -2.64   0.008    -1.339818   -.1986291
      guaran |  -.0107166   .3010293    -0.04   0.972    -.6007232     .57929
      design |   .4399195   .3136423     1.40   0.161    -.1748082    1.054647
  transecur |  -.5503017   .3003901    -1.83   0.067    -1.139055    .0384522
  presentqua |   .3429882   .3534075     0.97   0.332    -.3496777    1.035654
      commu |   .5555899   .2740507     2.03   0.043     .0184604    1.092719
      price |   .033033   .3663954     0.09   0.928    -.6850887    .7511547
    product |   .3233607   .3005711     1.08   0.282    -.2657479    .9124693
  apromotion |   .1463448   .3118897     0.47   0.639    -.4649478    .7576373
      _cons |  -2.953477   1.953237    -1.51   0.131    -6.781752    .8747981
------------------------------------------------------------------------------

.
.
. mfx

Marginal effects after logit
      y  = Pr(BOUGHT) (predict)
         =  .24786847

------------------------------------------------------------------------------
variable |      dy/dx   Std. Err.      z    P>|z|     [    95% C.I.   ]       X
---------+--------------------------------------------------------------------
  gender*|  -.2381565     .07726    -3.08   0.002    -.389584 -.086729    .495192
     age |   .0895979     .03426     2.62   0.009     .022457  .156739    2.77885
     edu |   .1042809     .03954     2.64   0.008     .026789  .181773    3.26923
  income |  -.0634445     .02826    -2.25   0.025    -.118824 -.008065    3.3125
conord~s |   .1084428      .0653     1.66   0.097    -.019541  .236427    4.28365
conpay~t |  -.1657897      .0717    -2.31   0.021    -.30632  -.025259    4.17788
 service |  -.0349992      .0436    -0.80   0.422    -.120445  .050447    3.89904
 network |  -.1434061     .05288    -2.71   0.007    -.247039 -.039773    3.82692
  guaran |  -.0019979     .05611    -0.04   0.972    -.111976  .10798     4.19712
  design |   .0820141     .05814     1.41   0.158    -.031933  .195961    4.00481
transe~r |  -.1025926     .05621    -1.83   0.068    -.212769  .007584    4.11538
presen~a |   .0639432     .06597     0.97   0.332    -.065363  .19325     4.34615
   commu |   .1035785     .05083     2.04   0.042     .003948  .203209    4.18269
   price |   .0061583     .06833     0.09   0.928    -.12776   .140077    4.15865
 product |    .060284     .05559     1.08   0.278    -.048668  .169237    4.08654
apromo~n |   .027283      .05803     0.47   0.638    -.086451  .141017    4.24038
------------------------------------------------------------------------------
(*) dy/dx is for discrete change of dummy variable from 0 to 1
```

Answer the research Question

Q1 **What personality of customer are buying online?**

Gender	“Male”
Age	“51-60 years old”
Education	“Technical”
Income	“20,000-30,000 B.”

Conclusion, the real target customer of purchasing online is the one who have basic knowledge or experienced about the shock absorber.

Answer the research Question

02

What is the factor influencing the customer purchase in Shock Absorber on online Platform?

- Demographic info
- Convenience Orders
- Convenience Payment
- Network effect
- Transaction security
- Communication

```
. logit BOUGHT gender age edu income conorders conpayment service network guaran design transecur present
> qua commu price product apromotion

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                                                LR chi2(16)       =      58.38
                                                Prob > chi2       =     0.0000
Log likelihood = -99.195265                     Pseudo R2         =     0.2274

------------------------------------------------------------------------------
      BOUGHT |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
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      income |  -.3403131   .1551715    -2.19   0.028    -.6444437   -.0361825
  conorders |   .5816821   .3541221     1.64   0.100    -.1123844    1.275749
 conpayment |  -.8892879   .3873569    -2.30   0.022    -1.648493   -.1300825
     service |  -.1877343   .2343728    -0.80   0.423    -.6470966    .2716281
     network |  -.7692236    .291125    -2.64   0.008    -1.339818   -.1986291
      guaran |  -.0107166   .3010293    -0.04   0.972    -.6007232     .57929
      design |   .4399195   .3136423     1.40   0.161    -.1748082    1.054647
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     product |   .3233607   .3005711     1.08   0.282    -.2657479    .9124693
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       _cons |  -2.953477   1.953237    -1.51   0.131    -6.781752    .8747981
------------------------------------------------------------------------------
```

From Hypothesis

Convenience in term of Orders and payment are significant at 0.1 and 0.05 sequently.

conord~s	.1084428	.0653	1.66	0.097	-.019541	.236427	4.28365
conpay~t	-.1657897	.0717	-2.31	0.021	-.30632	-.025259	4.17788

Convenience Order

The sign is positive meaning that the more convenience and easy to order on online, Individual will be more likely to purchase 10.84% (from marginal effect table)

Convenience Payment

On the other hand , people are concerning about online payment which is the reason of negative sign. If online store offers to make an online payment, Customer are less willing to buy at 16.58% because they still used to pay by cash or lack of trust.

From Hypothesis

commu	.1035785	.05083	2.04	0.042	.003948	.203209	4.18269
price	.0061583	.06833	0.09	0.928	-.12776	.140077	4.15865
product	.060284	.05559	1.08	0.278	-.048668	.169237	4.08654
apromo~n	.027283	.05803	0.47	0.638	-.086451	.141017	4.24038

Communication

It is significant at 0.05 statistic significant value. Communication through the chat is the place where customer feel comfortable to ask about all the informations and flexible access whenever and wherever convenience. In-depth interview, many customers claim that they can take time to make decision which better that purchasing under pressure in traditional store.

Price Product Promotion

Shock absorber is becoming competitive market, Thus all the brands are competing with price strategy and product differentiate. Customers may be indifferent between online and traditional in these factors

Answer the research Question

Opportunity

1. Reducing negative reputation by company campaign
2. Building the process of payment gateway to be more safe and reliable.
3. Online platform takes advantage in term of Convenience and informative service, Finding how to decrease complicated order and increase the abundant resource with the good service

THANKS

Do you have any questions?