

A Decomposed Customer Knowledge Management (CKM) Model for Better Explaining Customer Satisfaction (CS) in Jamaica's Public Sector

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Problem

- CS will lead to increased revenues in the public sector (Wallin, 1994)
- In recognition, governments have modernization and reform their public sectors
- Government support is driven by a satisfied citizenry
- CS is a desired end-state of the public sector
 - **Question:** How do we get public sector customers satisfied?

What do we know?

Managing Knowledge for, about and from customers (CKM) could lead to CS (Desouza & Awazu, 2005; Salomann et al., 2005; Yung-Ching et al., 2004)

Knowledge Base View (KBV)

- Knowledge is a key resource for competitive advantage and performance (Grant, 1996)
- KBV provides explanatory powers for linking CKM (proxy of knowledge) to satisfaction (proxy of performance) (Eisenhardt & Santos, 2000)

Prior Research

- Customer knowledge is a key driver of CS (Yung-Ching et al., 2004)
- Case Based Research (Salomann et al., 2005):
 - K for customer on complex financial products -> increased service levels and reduced waiting time (Union Investments, Germany)
 - K from customer vis-a-vis complaints and feedback -> better service delivery in mobile phone business (Siemens)
 - K about customer on their profiles and market segments -> improved CS (Credit Suisse)

Prior Research

- Case Based Research (Desouza & Awazu, 2005)
 - K for customer on sharing riding experience -> improved customer service (Harley Davidson)
 - K from customer on printer design -> more satisfied customers (Hewellett-Packard)
 - K about customer on taste and preferences -> healthier food options (T G I Friday)

Gap in Literature

- Little or no CKM work done in the public sector
- Prior research in CKM largely conceptual, case based and void of wide scale and generalizable application

Research Questions

1. Is k for customer, k from customer and k about customer associated with cs in Jamaica's public sector?
2. What are the underlying dimensions of k for customer, k from customer and k about customer that are associated with cs in Jamaica's public sector?

Method

- **Instrument:** Cross-sectional designed survey – questionnaires via face to face interviews
- **Sites:** Tax Authority of Jamaica (TAJ) and Registrar General Department (RGD) [representative of the CKM repository in the Public Sector]
- **Sample:** 195 respondents (45% RDG, 55% TAJ) - SPSS

Table 2: Sample Description

		Frequency	Percentage	Cumulative Percentage
Agency				
	RGD (Spanish Town)	31	15.9	15.9
	TAJ (Downtown)	46	23.6	39.5
	TAJ (Constant Spring)	62	31.8	71.3
	RGD (Downtown)	56	28.7	100.0
Total		195	100.0	
Gender				
	Male	103	52.8	52.8
	Female	92	47.2	100.0
Total		195	100.0	
Last level of Educational Attainment				
	Primary	15	7.7	7.7
	Secondary	83	42.6	50.3
	Tertiary	87	44.6	94.9
	Other	10	5.1	100.0
Total		195	100.0	
Age				
	Under 20	2	1.0	1.0
	21-25	14	7.2	8.2
	26-30	30	15.4	23.6
	31-35	25	12.8	36.4
	36-40	32	16.4	52.8
	41-45	26	13.3	66.2
	46-50	23	11.8	77.9
	Over 50	43	22.1	100.0
Total		195	100.0	
Occupation				
-	Unemployed/Retired	25	12.8	12.8
-	Manager	12	6.2	19.0
-	Professional	48	24.6	43.6
-	Technical/Associate Professional	24	12.3	55.9
-	Clerical	12	6.2	62.1
-	Service/Sales Worker	28	14.4	76.4
-	Skilled/Trade	7	3.6	80.0
-	Unskilled	21	10.8	90.8
-	Student	5	2.6	93.3
-	Self Employed	13	6.7	100.0
Total		195	100.0	

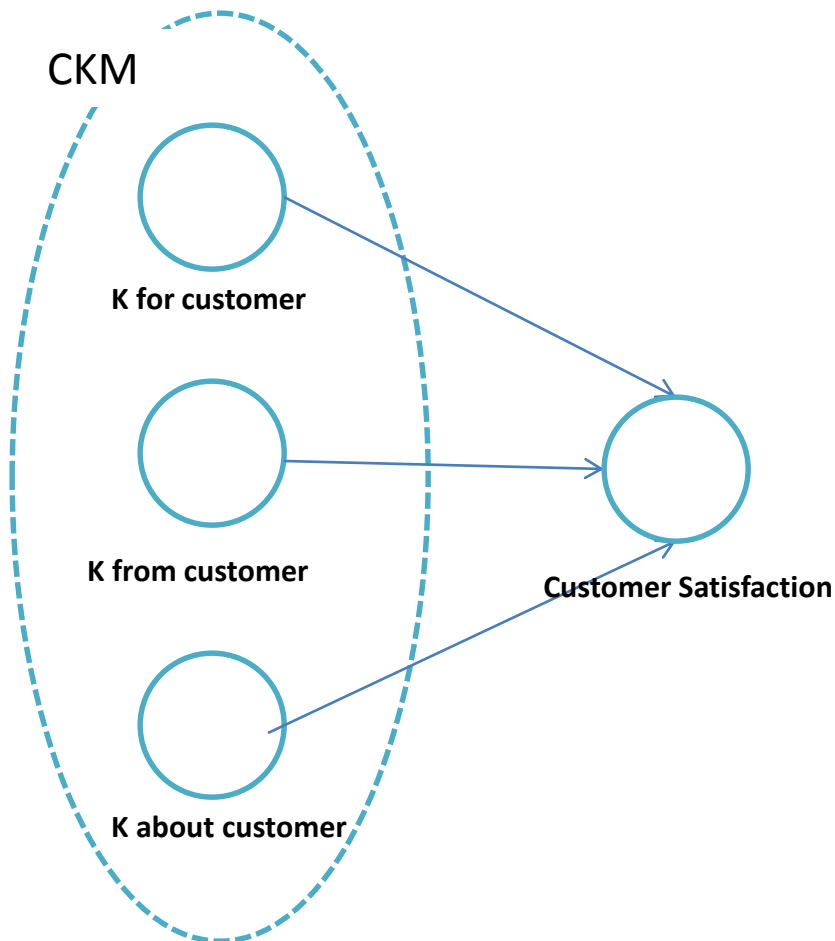
Method cont'd

Analysis

- Composite Model
 - Structural Equation Modelling (SEM) with SMART PLS 3
- Decomposed Model
 - Factor analysis and SEM

Model Development

Composite Model



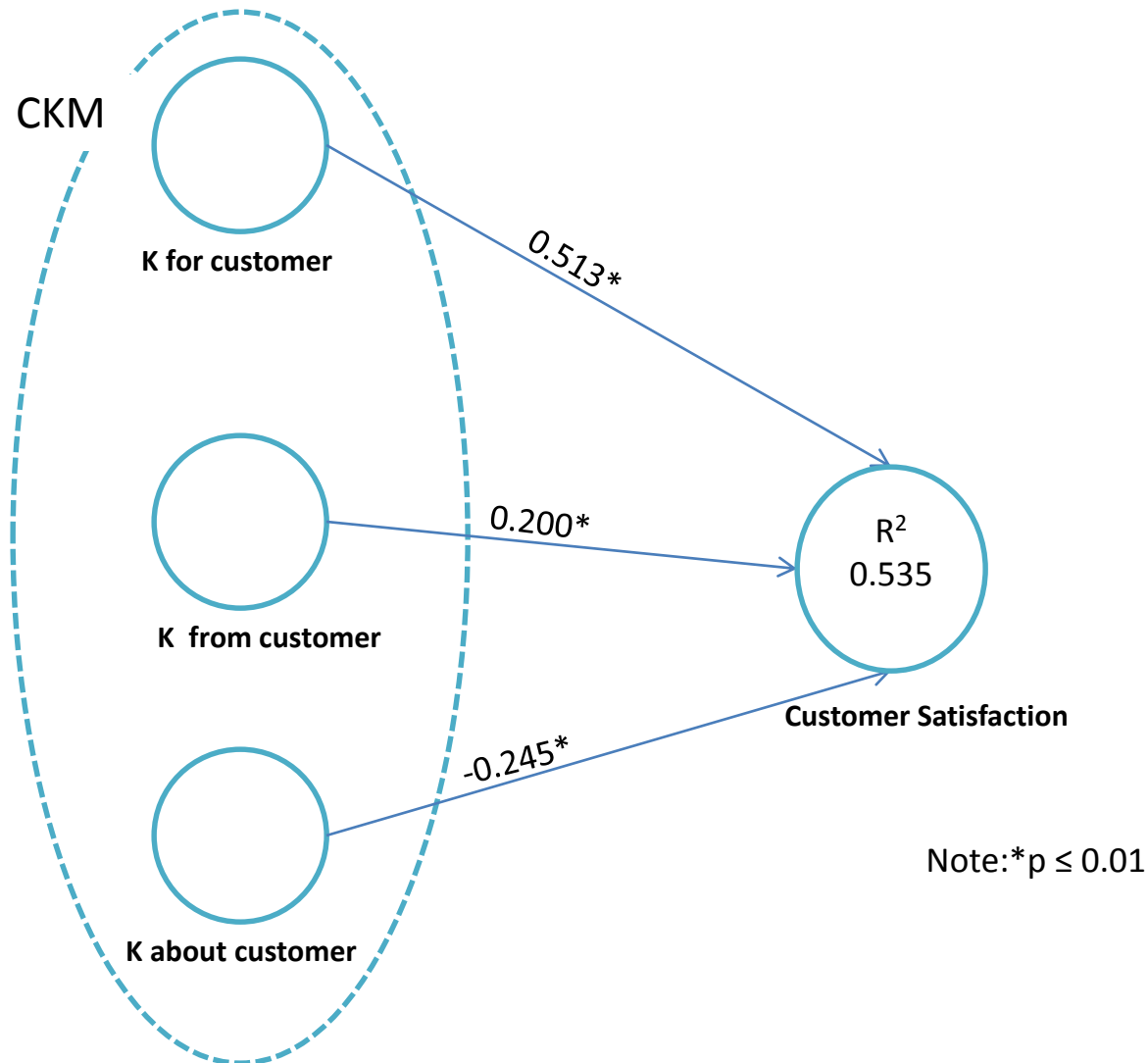
Instrument (e.g. of items)

- KFrC
 - Waiting line too long
 - Doing business is too complex
 - Staff is helpful at agency
 - Easy to access agency by phone
- KFoC
 - Website is informative
 - Brochures are adequate
 - Information desk is helpful
- KabC
 - Prefer online to face-to-face
 - Need greater variety of services
 - Will pay more for better service

Measurement Model Composite

- Factor loadings - between **0.637** and **0.852**
 - Composite reliability (**CR**) ranged between **.577** and **.876**
 - AVEs between **.241** and **.657**
 - **Indicate:**
 - Acceptable standard on **composite reliability** i.e > 0.60 on each of the four constructs
 - Acceptable standard on **convergence validity** (AVE > 0.5) on three constructs with the fourth, KabC (AVE = 0.241) being weak
 - Acceptable standard on **discriminant validity** with AVE > variance shared between constructs
- (Chin, 1998; Hair et al, 2014)

Structural Model Composite (Results)



Decomposed Model (Factor Analysis)

Knowledge from Customer (KMO=.782; Bartlett's Test with Chi-square=329.50, p=.000)				
Items	Factor Loadings	Factors	Eigenvalue	% of Variance
I usually have a good experience in doing business at the agency (Fr1)	.667	Service	3.035	33.720
I find that doing business at the agency is complex (R) (Fr3R)	.763			
I find that the customer service is not good at the agency (R) (Fr4R)	.696			
I find the staff to be professional at the agency (Fr5)	.721	Staff	1.166	12.952
I find the staff to be helpful at the agency (Fr6)	.549			
I find explanations to queries offered by staff to be useful (Fr8)	.681			
I find it easy to access the agency's representatives by telephone (Fr9)	.724			
I find that the staff at the agency to be responsive (administrative processes) (Fr7)	.841	Process	1.122	12.462
I find that the waiting line in the offices are too long (R) (Fr2R)	.512			

Decomposed Model (Factor Analysis) Cont'd

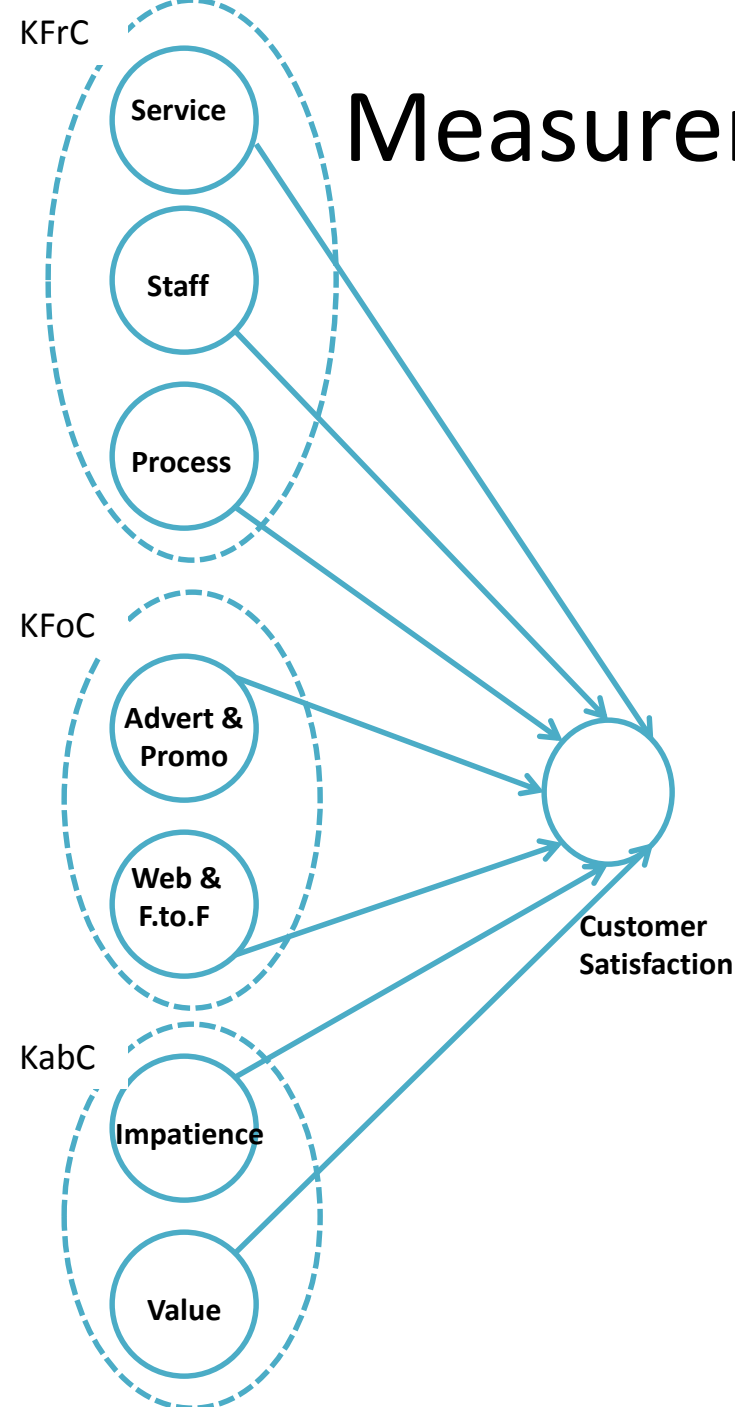
Knowledge for Customer (KMO=.588; Bartlett's Test with Chi-square=46.67, p=.000)

Items	Factor Loadings	Factors	Eigenvalue	% of Variance
I find the information provided by the agency's services on display boards in the offices to be adequate (Fo4)	.620	Advertising & Promotion	1.588	26.459
I find information that the agency provide through the media adequate (Fo5)	.756			
I find the information provided by the agency in its pamphlets and brochures to be adequate (Fo6)	.674			
I find the website to be very informative (Fo2)	-.608	Website and Face-to-Face Contact	1.076	17.929
I find the information provided by the information personnel on the floor to be adequate (Fo3)	.845			

Knowledge about Customer (KMO=.454; Bartlett's Test with Chi-square=17.28, p=.068)

Items	Factor Loadings	Factors	Eigenvalue	% of Variance
I am always hurrying when I do business at the agency (Ab3)	-.791	Impatience	1.242	24.843
I am very uncomfortable waiting in long lines (Ab4)	.710			
I am willing to pay more to get better services at the agency (Ab2)	-.707	Value (where value is quality/price and time bound)	1.098	21.965
I am often annoyed by the telephone automated responses (Ab5)	.734			

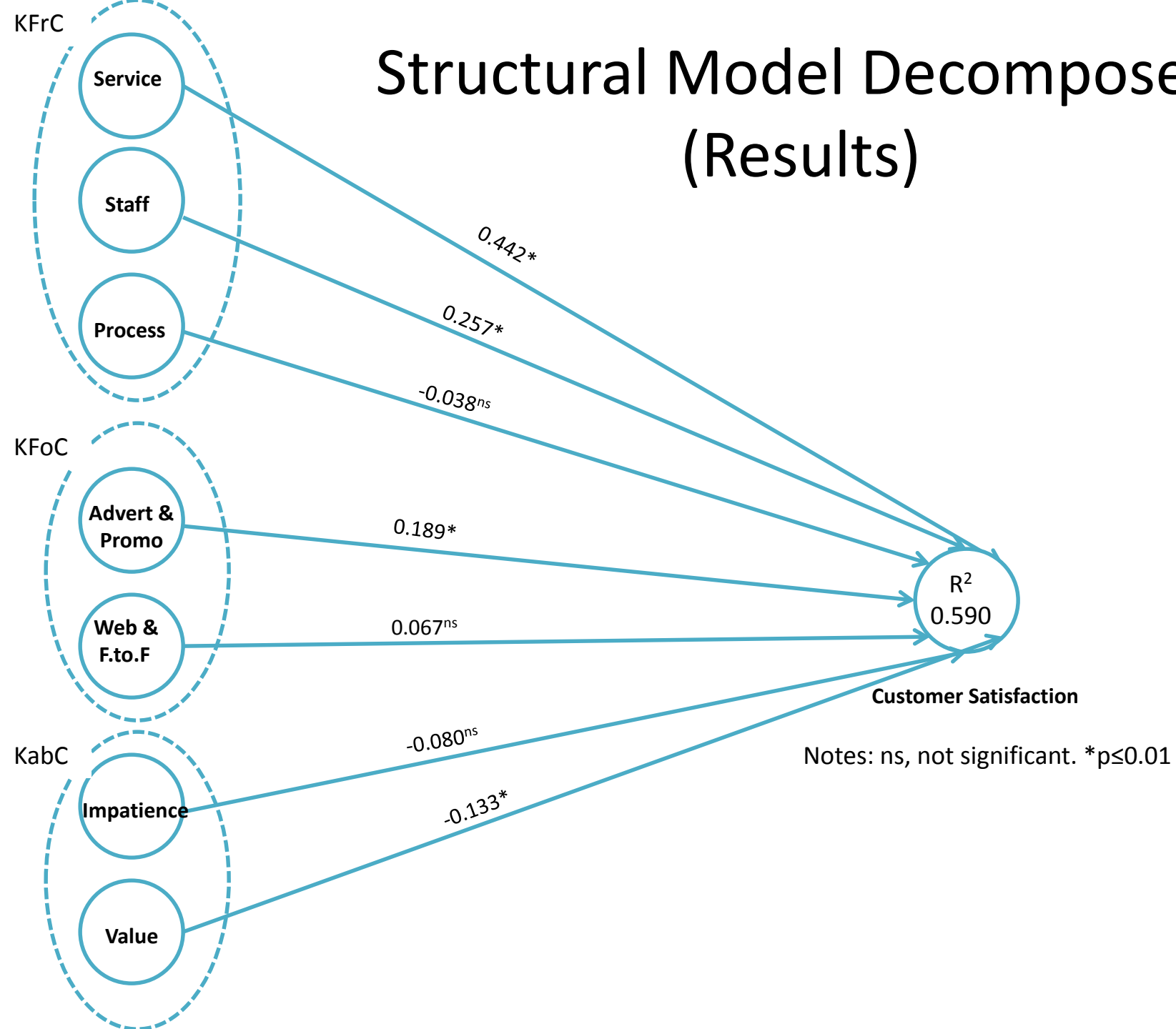
Measurement Model Decomposed



- Factor loadings - between **0.70** and **1.000**
- Composite reliability (**CR**) ranged between **.392** and **.884**
- AVEs between **.451** and **.657**
- **Indicate:**
 - Acceptable standard on **composite reliability** i.e > 0.60 on 6 of the 8 sub-constructs, except impatience (0.392) and value (0.548)
 - Acceptable standard on **convergence validity** (AVE > 0.5) on 6 of the 8 sub-constructs, except for advert & promo (AVE = 0.472) and impatience (AVE = 0.451) being weak
 - Acceptable standard on **discriminant validity** with AVE > variance shared between constructs

(Chin, 1998; Hair et al, 2014)

Structural Model Decomposed (Results)



Discussion

- Decomposed model better explained CS (59%) than composite model (54%)
- **Composite model:**
 1. Links between KFrC and CS (path weight = 0.513) and KFoC and CS (path weight = 0.200) were significant and positive (supporting KBV – knowledge drives performance)
 2. KabC was significant and negatively related to CS (path weight = -0.245) [the more govt knows, the more dissatisfied customers]

Discussion

- Decomposed model:
 1. Links between service and CS (path weight = 0.442) and staff and CS (path weight = 0.257) were both significant and positive (Better service and staff promote satisfaction in customers)
 2. Link between advertising and promotions and CS (path weight = 0.189) was significant and positive (more advertising leads to more satisfied customers)
 3. Web site and face-to-face contact were not associated with CS (low website use by customers; need for better soft skills in staff)

Discussion

- Decomposed model:
 4. Link between value and CS (path weight = -0.133) was significant and negative (the more discerning a customer is about value, the less satisfied he/she is likely to be with service)
 5. Impatience was not associated with CS

Implications

1. Effective leveraging of customer knowledge leads to successful organizational outcomes such as CS
 - Some aspects of CKM (K necessary for customer service and staff support) should be impactful, while others (K on processes) may not contribute to satisfaction
2. Customer knowledge (as a resource) should be decomposed into knowledge pockets to better engage customer groups

Limitations

- More indicators would be useful for more meaningful measures of CKM constructs
- Typical to survey research, response bias from over- and under-reporting may have influenced findings

Further research

- Address more indicators of CKM constructs
- Address the CKM-organization outcome link from other perspectives – value, loyalty

Conclusion

- Answers are provided to the 2 RQs
 - Each of the 3 key constructs in the composite model is associated with CS
 - At the decomposed level more in-depth understanding of underlying dimensions of CKM and so more targeted CKM strategies can be pursued

Contribution

- Study could guide public sector in Jamaica and wider Caribbean in policy development and planning on customer knowledge
- New CKM scale developed and validated
- Study extended literature on CKM within the public sector