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Service industry and its business-customer encounters

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SERVICE INDUSTRY BUSINESS-CUSTOMER ENCOUNTERS

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ABSTRACT

This study uses the pharmacy industry to demonstrate the applicability of a service value networks (SVNs) structural equation modeling (SEM) approach as new method to investigate services industries. The author's theoretically developed front-end business SVNs approach to customer engagement is modelled using observed business, customer and environmentally related variables. The business and the customer engage via multiple significant interaction pathways, which combine to deliver the net business-customer encounter outcome. This SVN SEM approach sheds new light on the complexities in delivering a business-customer exchange, and offers the manager an alignment tool that targets customer satisfaction, customer servicing and customer perceived value. This SVN SEM approach offers a more complex and engaging approach to that of customer relationship management (CRM).

Key Words: Service value networks, structured equation modeling, performance, strategy, competitive.

INTRODUCTION

The author's literature-grounded service value networks (SVNs) theoretical concept offers a new pathway to strategic and competitive positioning within a services business or across a nation-wide services industry sector. Based on the literature, and particularly empirical studies, an overarching model of the business-customer encounter may be constructed. This model displayed in Figure 1 and initially developed by Hamilton [18][19], shows that at the front-end a business engages: (1) its customer targeting and marketing; (2) its products and services; and (3) its communications and digital convergent content, distribution, and platforms. These three front-end business areas engage with the networked back-end of the business to compile business solutions suitably matched to the customer request. This sourcing may involve tapping the supply chain and also tapping external services to provide latest value adding components to the customer solution mix. These customer solutions may be provided to the customer as on-line, offline or a mixture of both on-line and off-line components. This model also depicts a difference between on-line and offline customers engaging with the business.

Figure 1 is an operations level model and it does not caprure other levels of engagement that participate in dealing with a customer such as (1) strategy and competitiveness [25]; (2) management input [10][12]; (3) financial and economic (or value) considerations [38][26]; (4) business orientation towards new ideas, innovation, and markets [10][33][18]; (5) the external inputs generated from mobile, web, media, competitor, and inter-customer sources. These additional engagement areas are often industry specific and are incorporated in Figure 2. Here the business engagement was seen to involve the service or product exchange, the marketing and awareness, the information transmission relevant to the exchange, and the economic exchange. These business-side business-customer encounter areas also exerted influence on each other in a networked approach similar to the back-end networking of the business. All aspects of the business were further influenced by the immediate competitive environment in which the business operated. Thus the business-side of the encounter with the customer is depicted as a networked array of business areas which are termed business cells.

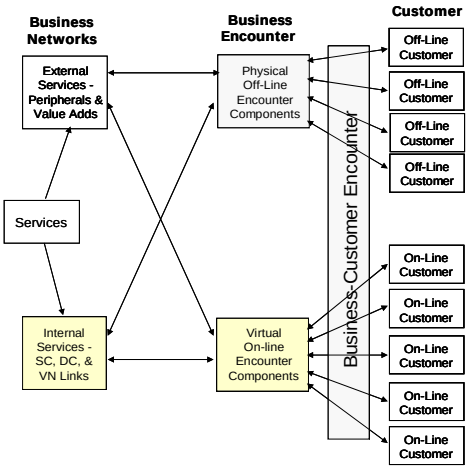

Figure 1: SVN Encounter Framework, adapted [18][16]

The customer side of the business-customer encounter is also complex. It involves on-line and off-line customers, and well as business and end-user customers. These customers seek solutions to their business-directed demands and requests –solutions that match or suitably deliver their requirements. However these requirements may be measured by the customer in a variety of ways. The customer seeks a level of satisfaction, and expects to receive a level of servicing, which the customer deems suitable or in line with their perceived value requirements. In addition the customer is inquisitive and is also driven by new perceptions which may be interpreted as new innovations, ideas, value adds, information, fun, and the like. Hence capturing the whims of customer is not an easy task, and timing is also important. Some encounters occur quickly, whilst others may occur over extensive timeframes and may even require multiple encounters. So the model grows in complexity.
This service industry study engaged the pharmacy industry across Australia. It captured by survey 168 business and customer measured front-end variables, each believed to have direct influence across the business-customer encounter. Over 160 pharmacies and over 600 of their customers responded, and a SEM approach was eventually employed to investigate this complex business-customer interface.

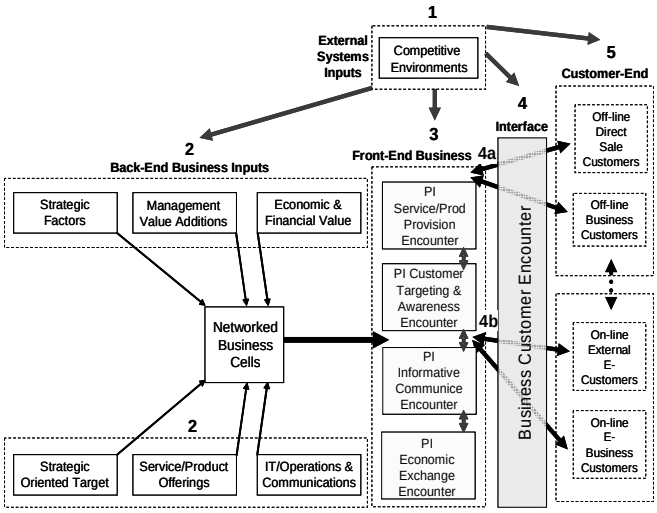

Figure 2 Service Value Network Encounter Model, [16]

SERVICE VALUE NETWORKS

SVNs [18][19][16][22][20][21][17] deliver understanding of what the business is really about – generating an exchange with customers, and doing so at an economically acceptable rate of exchange for both the business and the customer. Thus the business front-end business cells represent the back-end business funnel or channel through which the exchange occurs. This complex service delivery engages two conflicting but concurrent requirements: (1) the business leverages its economies of scale, and (2) the business delivers solutions, specific to the needs of the customer [13]. This process may engage highly-specific customized solutions [4], and bi-directional flows across back-end service supply networks that ultimately deliver customer demands and meet customer value [34]. This interlinking may also involve partnering companies that also target maximizing their combined successes and profitability [6][23].

AUSTRALINA PHARMACY INDUSTRY

Siegel [35] suggests that all players in an industry benefit from aggregation or sharing of information, ideas, and knowledge, and that a wealth of knowledge may be garnished by combining organizational expertise. This aggregation further supports a matrixed highly networked business, and business partnership relationships that all benefit from a shared enhanced competitiveness outcome. Siegel's work also suggested that industries would be wise to closely analyse their 'e' strategies, as this area added to their aggregated information and knowledge capabilities, and into their combined competitive frameworks [37]. This aggregation of linked capabilities to increased competitiveness may be seen in emerging new pharmacy business models like e-pharmacies, and in the proposed concept of SVNs. SVNs deliver a disruptive transition that is radically different to the existing business models [11][7]. SVNs have the potential to radically alter the competitive arena in which the business resides. Where and industry remains dynamic, and responsive to its recognised new challenges of value creation, servicing, and suitable modes of interaction with customers, a new approach is required. Of particular interest is the notion of SVNs [18][16][22][20].
As new business understanding and emerging technologies integration moves have been made, and the business model has progressed to new levels of customer engagement. These progressions have generally been in disruptive jumps rather than via smooth transitions. They are shown in Figure 3 as differing levels of networked, technologies incorporated to support and improve

the front-end business and customer interface encounters, mapped against the increased capacities of the business to better engage with its customers and so improve its customer related performance capabilities and outcomes. Figure 3 depicts the five key business disruptive transitions that have occurred over the past two decades, and prior to SVNs – which using this research approach, now offer the next deliverable model.

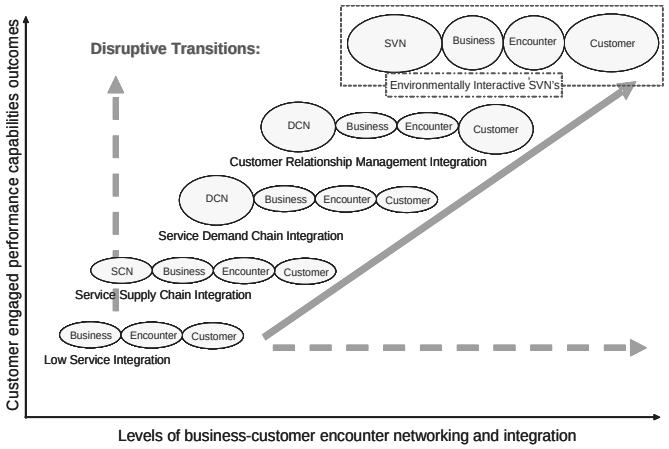

Figure 3: Disruptive Transitions towards the Service Value Network

SVNs network, and bind, all the components required to deliver the business-plotted customer solution. Here, the entire business system is intelligently networked into a matrix of suppliers, partners, peripheral (occasional) partners, and ad hoc logically tapped linkages that in-turn build and shape the (1) business-customer interface; (2) service offerings; and (3) enabling service delivery systems, in a united, customer-coherent manner. Thus a service and value and network solution may be built. This solution involves a disruptive transition from the simpler business models – typically supply chain management (SCM); demand chain management; (DCM) and customer relationship management (CRM). Such disruptive transitions are both costly and often require a significant retooling of the business to a new more complex, and integrated level of smart networking [11][7]. However, this retooling also delivers new competitive benefits like: improved back-end efficiencies, greater customer understanding and responsiveness, and increased knowledge integration. Such changes, if implemented wisely, offer the business a host of flow-on benefits and new possibilities.

Considering the pharmacy industry, the individual pharmacy business typically offers a low service integration model where networked solutions are not integrated. Here, a national prescriptions register is still required, so some networking is necessary, but automatic inventory management (and supply chain integration), marketing, human resources and financial databases options when in use, are rarely incorporated into such business solutions. Hence, this low level integration typifies a busy individual store, with little or no computerized operations, and it constitutes the oldest and least value adding model

Integrating the supply chain into a pharmacy delivers the next level of customer interactivity. Here, the SCM model offers some additional computerized operations are incorporated and key suppliers may have limited access to the pharmacy's activities, and product usage. To build this model from a low integration model requires considerable additional software linking inventory management, transactions and databases into a networked system.

To build the higher level responsive, DCM pharmacy model, sophisticated, well-integrated information systems are used to facilitate in-depth requests, to synthesise and target responses to the customer, and to updated the business's customer databases.

The CRM model delivers the methodologies, software and internet capabilities necessary to enable the business to manage its customer relationship in an organised way. It targets improving the business to customer interaction, but it does not deliver the tools to customerize, or build one-on-one relationships, as it employs gap analysis type procedures to align its business and customer sectors. Even in today's Australian pharmacies this approach was only found in a couple of combined on-line / off-line pharmacies.

The peak disruptive model is envisaged as the industry-wide SVN. Here, fully integrated computerized solutions may be intelligently delivered to the customer, via the serving staff, or the pharmacist, or via direct on-line customer engagement into the business network. The SVN enabled business intelligence tools may deliver agile, dynamic, flexible, customerized business-customer encounters capable of offering 'elevated-services' and 'added-value' solutions in response to customer requests. To deliver such a solution real-time, customer sensitive, industry-specific models must be developed, and this study shows how this

may be achieved.

PHARMACY SVN

The Australian pharmacy industry engages a collaborative network of pharmaceutical companies: health, cosmetics and beauty manufacturers; sports and medical support industries; peripheral suppliers; web channels; hospital, doctors, allied health and pharmacist operations; sales and web channels, large and small chains of stores, warehouses and logistics networks; and the like. Intermeshed with these is the: operational, innovative, marketing, servicing, financial and intelligent communications-data storage networks.

Figure 4 displays a global perspective of the externalities potentially affecting the pharmacy industry. Hamilton [21] further discussed these areas, along with their associations to the industry, and also the overall complexities of the industry. The Australian macro and micro environments, affecting this industry, have shown little variation over the past few years. In 2005 and 2006, Australia was portrayed by the OECD as the second most stable global economy [32], and its external macro and micro, environmental changes were minimal. At the time of this 2006 study the entire Australian industrial climate was deemed stable across the entire industry. However, technological area advancements continued, but only incremental changes emerged. Thus, at both the store level, and the industry level, the global external environmental perspectives impacting on this pharmacy industry SVN study showed little change, thereby reducing the external effects on the SVN system, and allowing a greater understanding of the front-end customer-to-business-to-customer exchanges to be elucidated.

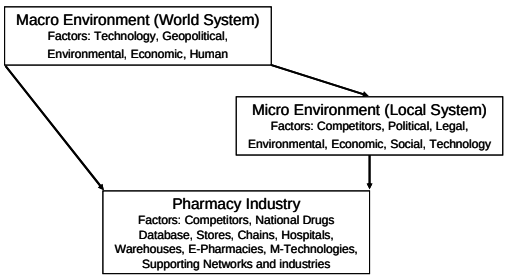

Figure 4: The Service Value Network Externalities

One recent technological change within the industry has been the emergence of several on-line E-pharmacies. To date these exist in conjunction with at least one physical off-line pharmacy (as a 'bricks (physical) and clicks (virtual)' model). These models are exhibiting rapid growth, and are filling a void in the marketspace. They incorporate highly sophisticated, integrated technologies may each be considered as operating as a store level SVN, or as a combined industry-wide SVN. At an industry-wide level a government required centralised SVN data storage solution exists. This system is connected to, and accessed by, all pharmacies nationwide, and sets a base level from which a fully nation-wide SVN structure may be delivered [18][16][22][20]. Today, mobile or m-technologies and Web 2.0 technologies [31] also offer new dimensions innovations and interconnectivity for the both the industry and its customers. For example, needing to know if a drug is suitable, a customer may SMS, text or video phone connect and obtain an answer – typically with the pharmacist charging a fee for this service. At the store level, stores, chains, warehouses and the like may be further interlinked, with both customers and stores further interlinked via a web-based pharmacy information portal.

At this industry-wide level the full pharmaceutical SVNs comprises a service related strategy. Here, key defined front-end business cells including: (1) the services/products provision; (2) the customer targeting; (3) the underlying communications information technologies and web related channels; (4) the economic imperative and the (5) innovative value additions engage with the customer, under a business channelled strategic/competitive framework. The resultant business-customer encounter is driven by customer demands and/or requests, and the business seeks and delivers its intelligent and best option solution set back to the customer. For example, to complete a customer's prescription details, the pharmacy intranet information networks are tapped, checked internally and across other stores, approved, supported with value adding drug taking information (such as safe drug dosages per body weight; possible cross drug mix complications; and the like) and relayed back to the customer. Cheaper generic drug options may also be suggested to the customer – and in a personalized manner, along with usage data, and peripheral alternate solutions. To further enhance business-customer dialogue pathways, additional SVN sourced service-related value-adding options may include: consumer allowable limits, claim options, delivery options, nearest doctor, hospital, medical insurance options, tax benefits, local preferences and the like. Such a SVN system also allows the customer to directly assess a range of innovative or value adds like – sourcing or requesting annual tax return data, linking to a doctor's surgery to lodge an appointment booking, or for information, downloading personal local hospital information, monitoring health or making a personal pensioner claim. In addition, business intelligence and knowledge/information from suppliers, research, and peripheral sources is also stored on local or centralized industry database drives, but this data also remains accessible to allowed individual pharmacies and their interacting customer(s). This data sharing, and collaboration, allows the business to move closer to its customers, and even allows the

customer to use a variety of pharmacy stores for desired prescriptions, medications, information, and the like.
Business stocking level data, linked to suppliers and logistics deliverers, may monitor 'use-by-date' stocks, general stock control, and may add customer generated requests as optional new additions for suppliers to consider. Hence, accurate inventory planning, without bullwhip effects, is deliverable. Both these supply-related efficiencies, along with net cost-of-delivery savings, may be generated [12]. The SVNs approach may, in the future, add interconnectivity into other medical services like: hospitals, doctors, ambulance services, and even police to the deliverable pharmacy systems – thereby creating an efficient, better-informed, integrated medical services information network. Under agreement, peripheral partners including health and ambulance insurance funds, medical researchers, may share information across some general data fields of the SVN. To build such a system requires a key starting point, and in Australia this initiator is likely to be the Pharmacy Guild of Australia – the peak lobby and decision making body for the industry in Australia.
This study seeks to capture the industry as a whole, and to deliver an approach whereby the pharmacy industry at a local, and an industry-wide level, may better understand the pathways by which it may build an effective SVN. The key to delivering SVNs lies in gaining a detailed understanding of the business-customer encounter. Frohlich and Westbrook [14] researched some internal business-to-business/customer effects, and although others [6] had written about the business-to-consumer dyad, until this work no broad scale empirical had been delivered. By understanding the interactions and pathways between the business, and each of its customers, new pathways to competitiveness may be released. For example, recognising that a particular servicing feature enhances the success rate in an exchange and making the appropriate business adjustment(s) to further improve this connectedness may in-turn improve business performance, drive cost efficiencies, and deliver enhanced perceived customer-perceived satisfaction. Thus the business-customer encounter is the focal point of this study and it sets the framework upon which a full SVN approach may be developed.

SVN SEM – PHARMACY RESEARCH

The Australian pharmacy industry is vigorously competitive, yet it also self-regulates to some degree roughly maintaining a pharmacy to every 3000 to 4000 persons. Small independent pharmacies and those operating as a local network of a few stores total around 80% of the industry outlets. Due to government protection from external non-pharmacy competition these stand-alone operations have had little pressure to combine, share their acquired skills and enhance overall efficiencies. This protected business situation will likely change in the near future, with major supermarkets and doctors pressing to access this pharmacy marketspace. This research aimed to show the industry how it could improve its overall business models and efficiencies. At the time of this research each pharmacy business outlet typically managed considerable overheads, large stock holdings (of medicines and complimentary products), quality, security issues, and the like. Each of the eight main pharmacy business models used their own competitive positioning and marketing strategies to grow their markets. They used traditional media including television, radio, newspapers, magazines and mailouts, or they reinvigorated and/or re-modelled stores, or they developed various on-line web sales avenues. However, long term solutions, industry-wide new efficiencies were desired, and there was scant information to indicate that approaches to date would remain successful in the long term. This SVNs research offered a new possibly innovative approach to the industry and its future strategic positioning. As all stores are front-line operations and involved few levels of business this research was able to directly focus on the on the immediate business environment (deemed stable, but with store generated variations), and the remaining three blocks of the SVN associated with the business-customer interface – the business cells and their interactors (or measured variables), the business-customer encounter and the customer cells interactors (or measured variables), and it also targeted new alignment techniques across the business-customer encounter (or interface).

SVN SEM APPROACH

This research successfully surveyed and modelled the Australian pharmacy industry as a SVN. A structural equation modeling (SEM) approach was used. Data grounded in the literature, was: validated, matched, normalized, split into constructs, modelled and further validated. The business-customer encounter was found to be a complex entity consisting of multiple, significant, alignment pathways that enhanced customer perceived measures (like perceived servicing and value and customer satisfaction) to varying degrees. From this study, it is now possible to realign the pathways between each front-end business cell's interactors and its corresponding front-end customer cell's perceived interactors. In addition, it is also possible to better engage the business back-end to its front-end customer engaging cells. These SVN SEM processes are discussed next.

PHARMACY SVN SEM SOLUTIONS

The SVN SEM approach delivers industry specific construct reliability and validity, provides additional fit measures for systems of equations, and allows the estimation of higher order factor analysis (where no observed indicator of these higher-order factors is available). SEM is a powerful enhancement to multiple regression approaches [24]. It accounts for the modeling of interactions, nonlinearities, correlated independents, measurement error, correlated error terms, multiple latent independents (each measured by multiple indicators), and one or more latent dependents, also with multiple indicators.
The pharmacy SVN SEM solution, portrayed in Figure 5, encapsulates the six defined front-end business cells latent constructs (oval), each with a latent variable of interactor measures (rectangle). All fifteen possible covariances between these latent constructs were significant (at 95% confidence). These covariances represent the degree of networking between the front-end business cells. Each network path (covariance) is significant at 95% confidence), and shows a SVN structure does exist at the

front-end of the business. The customer latent constructs (and latent variables) – customer perceived servicing SERVDEL (SVDEL); customer perceived value CUSTVAL (CUSTVALT); and customer perceived satisfaction SATISFY(SATT) representing the front-end customer perceived value cells (which are unobserved by the business), engage with (1) the business latent constructs and its latent variables – business strategic positioning POSITION (POS); business-customer targeting / tracking TRACK (TRAKT); innovation and value adding INNOVATE (INNOVA3); communications, IT and web-use operational components engaged WEB (WEBUSET); economic value ECOSERV (ECOSV) and business services / products delivered CUSTSERV CUSSVT); and with (2) the external environmental areas latent constructs (and latent variables) – information / value additions INFOVALS (INFOVAD); and external values sourcing EXTVALS (EXVAD). In addition to the above variables sixteen other unobserved error terms – e1, e2, e3, e4, e5, e6, e7, e8, e9, e10, e11, Res1, Res2, Res3, Res4, Res5 are captured Hence, this SEM model encapsulated 38 variables. Each latent business cell, customer cell or external cell variable consisted of between four to six observed measures (with each observed measure displaying significant loadings for its connected latent variable).

Each observed variable displayed a kurtosis near zero (between 0.0 and 0.5), and a net multivariate kurtosis of 5.36 (c.r. = 1.68). Being well under 10.0 (and above 3.2) and involving 11 variables a small degree of non-normality was present (Byrne, 2001). To further enhance normality, transformations denoted with a last letter 'T' (like TRAKT), were sometimes used. All standardized path coefficients were below 0.7 indicating no significant discriminant validity problems were encountered, and all covariance pathways showed low to moderate influence (< 0.423) and no significant multicolinearity. The eigen elbow also supported 11 variables. The chi-square to degrees of freedom ratio ($\chi 2$ / df < 2), high goodness-of-fit, whilst p > 0 0.05 indicated excellent final model fit, and a minimal (optimal) SVN SEM model. The scalar regression weights, indicated all pathways were significant ($p < 0.05$), and these pathways offered the greatest chance of reproducing the observed data. Covariances engaged with the WEB latent construct were negative because the business (pharmacist) perceives web related communication activities as unimportant, and often do not have a website attached to their business model. In contrast the customers see this communications, IT and web-use operational area as important and providing a significant addition to their perception of their pharmacy. The WEB area warrants further business side investigation.

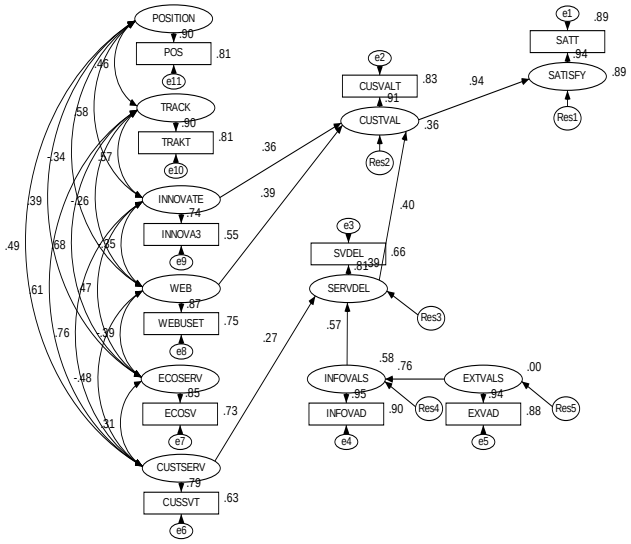

Figure 5: SVN SEM Model (Standardized Estimates)

The business-customer encounter direct engagement pathways are represented by the CUSTSERV-SERVDEL, WEB-CUSTVAL; and the INNOVA3-CUSTVAL linkages. The path standardized loadings indicate the fraction of unit variation exerted on the engaging customer cell. Each pathway value captures the combined direct business cell effects, along with its additional contributing covariant indirect business cell contributors. These business cells exert Pathways influences of around 30%-40%, but the total perceived satisfaction influences total 94%, indicating the SVN SEM model captures its major contributors.

The R^2 measures of reliability (or consistency of measurement), and the error variance ($1– R^2$), showed each latent variable was a significant contributor to the model. Implied correlations matrix, residual covariances and standardised residual covariances correlations also supported this solid SVN model validity. The standardised total effects (direct and indirect) for the customer dependant latent construct (and variable) SATISFY (SATT) showed excellent fit with all its prime effectors: (1) the customer perceived value and its two feeder business pathways, and customer feed; (2) the services experienced with its business feeder pathway and external feed; and (3) the net external information pathways. Factor loadings were in all cases above 0.6, with all loadings delivering convergent validity. Acceptable and minimal bias was shown by all estimated SE-bias values being smaller than their latent variable standard errors (SE). Thus, direct structural relationship between observed variables and associated latent

variables was successfully indicated. Construct validity was readily shown with all goodness of fit measures being excellent. In all cases discriminant validity measures also displayed high acceptability. RMR (0.230), GFI (0.972) AGFI (0.944), RMSEA (0.000) all indicated excellent goodness-of-fit, while the CFI (1.000) and TLI (1.071) indicated excellent incremental fit. Further, considering parsimony PRATIO (0.600) for this small sample size was satisfactory, as was the 84.4 value for the AIC default model – when compared to the saturated model value of 132.0 [3][29][2][15][27][28][8]. Thus, an excellent SVN SEM model fit existed.

To validate this SVN SEM data set bootstrapping (1000 times, maximum likelihood (ML), 95% confidence), verified the data sample was representative of the population, and observations independent. ML charts, and optimized data (KL) charts, indicated a close approximation to normality, thereby avoiding significant calculation misspecifications [30][8]. Lastly, to support sample invariance, a new SVN SEM pathways calibration/validation was investigated, and found to deliver further support to the data quality. This approach involved using a reduced latent constructs model with variable cells directly contributing to the business-customer encounter. This SVN SEM pathways model approach was recently discussed by Hamilton [17], and it is included hereunder as Figure 6. The resultant model displayed excellent fit, as calibration/ validation and under multi-sample restriction invariance analysis approach [5][36]. This SVN SEM pathways model has one additional covariance, which further tightened the fit of initial model, and could be justified as innovation may be derived from a host of sources including those external to the model, hence this additional covariance pathway was accepted. The model, without this additional covariance, also maintained excellent fit.

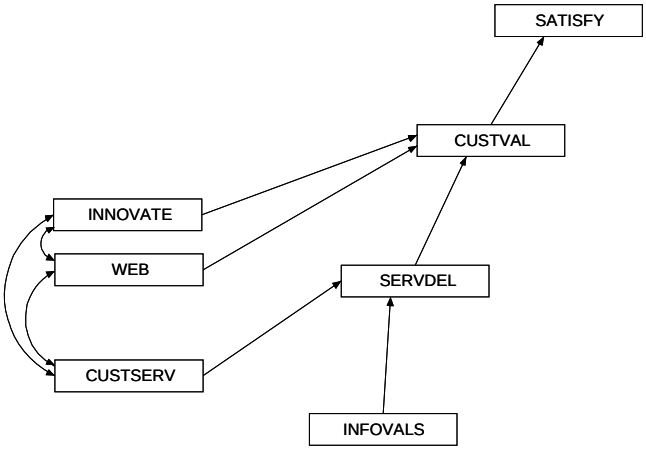

Figure 6: SVN SEM Pathways Sample Invariance Model

DISCUSSION

This empirical study shows the relationship between the business and the customer may be measured, and paths or influence acting between the business and the customer may be determined. This work shows that the front-end business cells (each housing four to six principle measures per variable) are networked together, and all have an influence on the customer's perceived views of the business, and on the options the business delivers in response to its customer's request.

The business responds to the customer's requests in a variety of interlinked or networked ways, and the combination of these network responses, in-turn, influences overall customer perceptions, and the degree of perceived customer satisfaction. The satisfaction driver is the prime and complex variable. It is derived from over twenty measures, and is shown herein to capture the vast majority of customer perceptions regarding the pharmacy business. This work also shows that to better engage with customers, pharmacies need to develop high quality communications channels including information technologies and web-usage components. The customer's perception is directly influenced by both the business, and the immediate micro environment surrounding the customer and the business, but the business exerts the greatest influences.

This study adds understanding to the nature of the business-customer encounter. The encounter is complex, multi-pronged and its interaction pathway influences, once understood, may be built into an intelligent SVN database. This SVN database may then be modelled by business (or software) to derive the optimum business alignment (to its customer requests) solution. This SVN realignment can then be physically implemented with real-time business database updates feeding into the new system. At the same time it can be further tested and measured, with improvements and changes continually added to the operational dynamic SVN pharmacy database. By understanding the SVN business-customer encounter the back-end business matrix networks may be enhanced and a new competitive approach may be delivered – one that is very difficult to copy! To this point in time true customerization (where one business relates individually with each of its customers on a individual and personalized way) has not been possible across industries, but by engaging a SVNs approach this divide may now be overcome. This SVN SEM approach proves the existence of SVNs and it adds another level of competitiveness capabilities to service industries.

Currently this SVN SEM research is developing the intelligent database model solution for the pharmacy industry. Once built, tested statically, and further refined to capture real-time customer updates it will be further tested, repositioned, refined, and eventually implemented as a continuous, artificially intelligent, fuzzy logic learning system that delivers both enhanced perceived

customer perspectives (customer values), and significantly enhanced business economic value propositions.

It is envisaged that the SVN SEM business-customer encounter will show up to six front-end business cells having significant pathways to customer cells. An additional front-end business cell representing 'interactivity' may also be added in the future. Additional customer front-end cells are possible, but are not believed to directly affect the business-customer encounter. This projected future SVN model, and its proposed pathways is shown in Figure 7.

This Australian pharmacy study demonstrates a new networked approach to understand the modern business and its immediate environment. This theoretically developed, and research supported, SVN SEM approach defined the key front-end business cell latent constructs and their measurement interactors which possibly effected, and / or affected, influence(s) across the business-customer encounter. This SVN SEM business-customer encounter model highlighted why this area of study has been poorly investigated. The business-customer encounter is not a simple pathway, but rather a series of multiple pathways that all contribute significantly to the net customer perception result. In addition to the business effects, the external environmental effects, also participate and exert influence on the customer. Each front end business cell consists of a block of interactors (or measures) that may be varied to improve business-to customer outcomes. These interactors may directly and indirectly influence the business-customer encounter pathways and their outcomes. Once understood these business-customer encounter pathways may be used as targeting pathways aimed at better delivering customer demanded requirements. This SVNs approach, linked to smart network databases and appropriate intelligent data picking tools, offers near-real-time solutions, and moves the business customer relationship well beyond well beyond existing CRM approaches. When used in conjunction with smart networked back-end systems SVNs are seen as the next level of competitiveness (more sophisticated than CRM and earlier models).

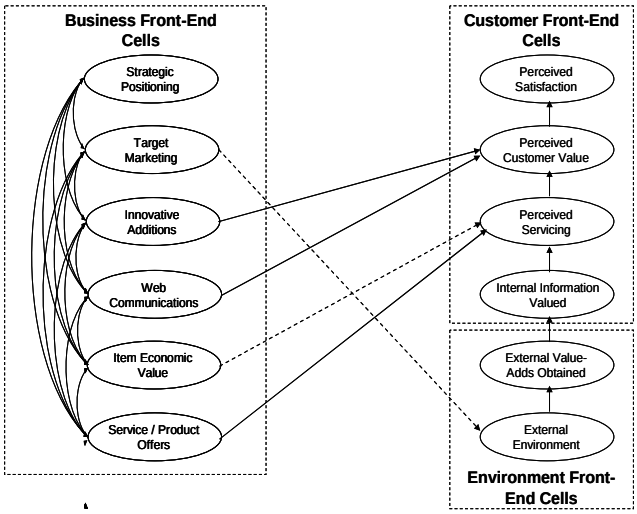

Figure 7: Business-Customer Encounter Pathways for a Services Industry

CONCLUSIONS

The SVN SEM approach clearly delineates areas in which the business may improve its customer contact. If engaged wisely an improved degree of economic reward is likely, along with an improved degree of perceived value enhancement and satisfaction for the customer. This SVNs approach is industry specific, country specific and in times of significant turbulence and change, possibly regionally specific. It is an efficient, understandable, and appropriate approach for market leaders, innovators or differentiators.

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