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**TITLE: IS MARKET COMPETITION NECESSARY OR SUFFICIENT FOR HIGH PERFORMANCE HEALTH SYSTEMS?**

**PAULINE VAILLANCOURT ROSENAU, PROFESSOR  
MANAGEMENT, POLICY, AND COMMUNITY HEALTH UNIVERSITY OF TEXAS, HOUSTON - SCHOOL OF  
PUBLIC HEALTH; HOUSTON 77030 TEXAS USA  
EMAIL: PAULINE.ROSENAU@UTH.TMC.EDU**

This *research* examines several untested propositions from the theory of market competition in the health sector. Employing the **comparative case study methodology from business research** for several geographical locations, **hypotheses** that ask if market competition will improve health system outcomes on cost, quality, and access are presented and assessed. The *domain of application* is the health system of industrialized countries. An additional *specific research aim* is to consider if results are contingent on the degree of health system regulation. **Findings:** 1) Theories that predict that market competition in the health sector will contain costs can safely be rejected. Market competition is neither *necessary* nor *sufficient* for cost containment. These findings remain the same across all levels of market regulation. 2) While market competition by itself is neither *necessary* nor *sufficient* to maintain or to increase access in the health sector, regulation is *sufficient* for preserving or increasing access in the market-based health system. 3) Information on quality of care is uniformly poor across all the health systems studied. **Conclusions and contribution to knowledge:** The ultimate *goal* of this research is to add to the growing body of translational policy knowledge of use to policy makers. Policy makers should be alert to the need to revise the theory of market competition as regards cost and access in the health sector in industrialized countries. The effect of market competition on quality of health care is unknown.

# **TITLE: Is Market competition Necessary or sufficient for High Performance Health Systems?**

**By: Pauline Vaillancourt Rosenau**

In recent decades many industrialized countries are turning to market competition to reform the health sector in the belief that the private sector can achieve public goals. Health care has come to be considered the same as any other merchandise – best produced, priced, and distributed through the free market where self-interested, rational, individuals are free to purchase goods and services on the basis of personal choice with little government interference. This, it is said, assures equilibrium as consumers and producers enter and leave the market depending on the price of services, which varies according to supply and demand (Parkin, 1999). The theory of market competition suggests that the general performance of the health sector will be improved, with lower overall health system costs, increased accessibility, and higher quality health care (Herzlinger, 1997). The role of government in the health sector should be reduced and “cost containment and efficiency left to private players.” Risk bearing, competing insurance companies are expected to function as buyers of health care services for their policy holders within the rules set by the government (Kaiser Family Foundation, 2008e comments by Wynand van de Ven, p. 22). Many industrialized countries have experimented with this model in some form over the last two or three decades, including the U.S., the Netherlands, Switzerland, Italy, New Zealand, Spain, Sweden, and the United Kingdom (Laugesen, 2005)<sup>1</sup>.

## **1. OBJECT OF THIS STUDY**

The object of this study is to test the assumptions of market competition using the comparative case study method developed by researchers in business schools. An experiment is the best test of theory. There are, however, no randomized controlled studies of market competition in the health sector market; no research meets the methodological “gold standard” on this topic. Ethics and practicality preclude manipulation of variables at the level of societies. In many industrialized countries, experiments with market competition in the health sector have been implemented together with other policy innovations which complicates coming to any conclusion about the market itself. These innovations include privatization (OECD, 2004), the transformation of nonprofit providers into for-profit entities (P. V. Rosenau & Linder, 2003), and the introduction of demand-based cost containment policies or supply-side cost control measures (Rice, 2002). While regions or states cannot be assigned to health system reform conditions on the basis of randomization, non-experimental designs including international comparisons, and studies of time trends provide a limited basis for policy interventions despite the presence of confounding factors (Hardt, 2008; Stronks & Mackenbach, 2005).

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<sup>1</sup> In the U.S. several different health systems exist side by side and each system must be studied individually and considered a case by itself.

The theory of market competition involves several specific and precise propositions applicable to the health sector. Few of these have been tested and most are simply assumed to be true. Employing multiple case studies, the propositions of this theory will be systematically examined here. Evidence and experience about the performance of market competition in the health sector should guide policy. Ought policy makers act to increase market competition, preserve it as it stands, or is it time to move in another direction?

## 2. METHODOLOGY: THE COMPARATIVE CASE STUDY AS A RESEARCH STRATEGY

The comparative case study method is employed here to discover if market competition (independent variable) is a necessary and sufficient for performance improvement defined by lower cost, high access, and better quality in the health sector. It is commonly assumed that the case study cannot be used to test theory. However, the case study is the next best substitute for an experiment in testing theory, and for assessing relationships among variables. It “is a study in which (a) a small number of cases in their real life context are selected, and (b) scores obtained from these cases are analyzed in a qualitative manner”(Dul & Hak, 2008, 45). The qualitative comparative case study has several advantages, especially when it is used in combination with the rigorous analytical, structured logic presented in terms of necessary and sufficient conditions (Goertz, 2003).

From a methodological point of view the results of case studies can never be used to prove a theory, but confidence that the results apply to the domain studied is greater increase if repeated tests confirm the result (Braumoeller & Goertz, 2003). In addition, if one variable clearly precedes another, confidence as to the direction of causality increases. In most circumstances a single case is all that is needed to reject a hypothesis. In other words, “The co-occurrence of A and B, (or the co-occurrence of non-A and non-B) in an instance does not prove that A is a sufficient cause for B. The presence of B can be the result of another factor than A. The occurrence of A without B, or the absence of B with the presence of A, however, implies a rejection of the hypothesis.... Finding one instance in which a proposition is rejected is sufficient for concluding that the proposition is not correct” (Dul & Hak, 2008, p 78).

The **propositions** associated with the theory of market competition in the health sector give rise to specific hypothesized relationships in the empirical realm (Dul & Hak, 2008, p 65). Not only do propositions of a theory, (such as market competition theory) speak to causal relationships among the concepts, they also focus attention on detecting whether such relationships are necessary, sufficient, or deterministic. A *necessary condition* means that A is required for B to exist. A *sufficient condition* means that A always leads to or causes B (Dul & Hak, 2008, p 78). A relationship is defined as deterministic if “A is higher, then B is higher” (Dul & Hak, 2008, p 69-71; Most & Starr, 2003) .

Below are several hypotheses derived from propositions central to market competition theory in the health sector that are assumed to be true (numbers 1-3). They will be tested and results presented in Section 3. In addition, exploration of practice gives rise to supplementary hypotheses (numbers 4-5) regarding the influence of regulation in the context of market competition in the health sector. The real world application of the theory of market competition to the health sector includes what can be called a “theories-in-use” domain (Dul & Hak, 2008).

- 1) If there is market competition in the health sector, then **costs** will be contained (Cannon, 2007, pp. 64-65).
- 2) If there is market competition, **access** will be improved or if already high, then it will be maintained (Rettenmaier & Saving, 2000).
- 3) If there is market competition, **quality** of health care will be improved (Cannon, 2007).
- 4) Regulation of market competition in the health sector is required for **costs** to be contained (Saltman & Figueras, 1998).
- 5) Regulation of market competition is required for **access** to health insurance to be increased, and if already high, to be maintained (Saltman & Figueras, 1998).

### **Defining the Concepts:**

Concepts of any theory are the “variable characteristics of the object of study” (Dul & Hak, 2008, 35). Those employed here include:

**Cost containment** means that year to year national health care expenditures do not increase at a rate greater than inflation. A country or health system that achieved near zero annual real growth in health spending per capita can be said to have contained costs. “The rate of excess growth equals the rate of growth in health spending per capita minus the rate of real growth in GDP per capita and the rate of population aging. If excess growth were 0 percent, then health spending per capita within each age group would grow at the same rate as GDP per capita” (White, 2007).

The term **access to health care** refers to the percent of the population having health insurance. Health insurance is the key to obtaining health care in the industrialized countries. Whether an individual has health insurance has an important impact on his or her health status. Insurance translates directly into access. Access is, in turn, closely related to improved health status and quality of life (Dorn, 2008; Institute of Medicine, 2004). Adequacy of an individual’s insurance coverage was not taken into consideration because objective measures for all cases are not available. **Quality of health care** refers to health system outcomes, error rates, respect for practice guidelines, etc. **Market competition** in the health sector refers, here, to demand-side market systems that include competing insurers, consumer choice as to insurance policies, and the option for consumers to switch insurers. **System performance in the health sector** is defined as high access, high quality and cost containment.

**Regulation** means rules are set by the national or federal governments that require compliance by health care providers (doctors, hospitals, etc), residents of a country, and insurance companies. In most cases, a variety of regulations govern the health system and many rules are adopted at lower levels of government. It is not possible to consider these state, regional or canton level regulations in this study because they vary so widely and because the national level regulations take priority over lower levels of government in most cases. The only exception is the case study of Massachusetts which is a unique and important state level system in the U.S.

**A score for overall regulation** was assigned to each of the principal health systems studied. This score was based on the simple arithmetic sum of the various regulatory elements health policy experts generally consider important (present or absent) (See Table 1). This regulation score measures the extent to which stakeholders in a health system, such as insurance companies and individuals, are constrained by rules on the topics of guaranteed issue, standardized basic health insurance policies, individual mandates to purchase insurance, community rating, and income-based subsidies for purchase. *Guaranteed issue* is a “requirement that insurers accept specified applicants for coverage, generally without regard to their health status or previous claims experience” (Claxton, Feder, Shactman, & Altman, 1997, p. 10). *Community Rating* is a “rating method under which all policyholders are charged the same premium for the same coverage.” “*Modified community rating*” means that insurance companies are allowed to “vary premiums for coverage based on specified demographic characteristics (e.g., age, gender, location) but cannot vary premiums based on the health status or claims history of policyholders.” (Claxton et al., 1997, p. 11; George & Bennett, 2005). *Individual mandates* means that each person has the responsibility to obtain health insurance one way or another and they are held accountable for doing so. *Low income subsidy* means that government assists those with lower incomes to pay for their health insurance. *Standard benefits package* means that insurance companies offer a health insurance policy that is standardized, making it easier for the purchasers to compare the policies on the basis of price. *Risk pools for insurers* means that a plan is in place to compensate health insurance companies that end up with sicker or older insured populations for which they are responsible. *Limits on insurer’s profits* signify that legislation prohibits making a profit on the basic standardized health insurance policy.

**A domain** is the “universe of instances to which statements apply” (Dul & Hak, 2008, p. 281). The domain of this study is health systems in western industrialized countries. The **population representativeness** is defined as the similarity between the cases available for study and the population of industrialized countries. In our study, the cases are much like the other industrialized countries and the results, if consistent across cases, are very probably applicable to other industrialized countries. No claim is made that the results are relevant for the developing countries. By choosing industrialized countries or subsystems of these countries in the case of the US, we sought to avoid sampling from the largest population -- the entire global family of nations-- and to focus instead on “specific populations in which the variation between the instances is much less than in the larger population” (Dul & Hak, 2008).

**Case selection criterion:** Health systems in the domain of study with *ongoing experiments with market competition* were selected for study. The Netherlands and Switzerland are the most important tests to date and they are being watched by policy makers in many other countries. The

U.S. is not one integrated health system but rather many health systems (Medicare, Veterans Administration, military, employer based, federal employees health system, incarcerated individuals, Indians, etc). Three U.S. subsystems, two national, and one state health system, were actively experimenting with market competition and they are included in this study. In addition, OECD data on variables of interest for several countries that have not been experimenting with market competition are referenced as controls.

**Switzerland** adopted market competition in 1994 and implemented market-based health insurance in 1996. All individuals must purchase basic health insurance – government assistance is available for those with lower incomes (40%) to obtain it. The basic law at the federal level is implemented in a highly decentralized manner by the cantons. The health system includes high access and regulation to assure that there is a level field for competition. Health insurers are not permitted to make a profit on the sale of basic insurance policies, nor are insurers allowed to bargain and negotiate with providers, that is, to selectively contract with them.

**Netherlands** – a market-based health insurance system was implemented on January 1, 2006. Inspired by Alain Enthoven’s model of managed competition, it includes a mandate for all to obtain insurance, as well as competition between insurers on price for the basic health insurance policy that must be sold to all citizens (guaranteed issue) at a modified community rated price. There is a sophisticated risk-adjustment system for insurers. Consumers may join together to buy insurance collectively at a discounted price. While the insurers may try to make a profit on the basic health insurance policy after more than two years they have failed to do so. Insurers are allowed to contract selectively, bargain and negotiate with providers, but they do not do so to any great extent (P. Rosenau & Lako, 2008).

**Medicare Advantage** is the private sector part of the general U.S. Medicare program that is available to the over 65 population. U.S. Medicare is an important case study of the effect of market competition on costs. Here, a universal health care system for those over 65 was transformed by the Balanced Budget Act of 1997 to permit market competition between traditional government managed Medicare and private-sector organized Medicare (called Medicare Advantage). The goal of this experiment with the market was to use competition to reduce costs and increase efficiency. Medicare Advantage is the successor to Medicare private sector experiments with HMOs in the 1970s. In 1997 Medicare+Choice followed. It included PPOs (preferred provider organizations) and PSOs (provider-sponsored organizations), private fee-for-service plans (PFFS) as well as MSAs (high-deductible insurance plans). The Medicare Prescription Drug, Improvement and Modernization Act of 2003 renamed it as Medicare Advantage and added a private sector prescription drug program to it.

**Private Insurance in the Independent Market in the U.S.** is defined as health insurance policies that involve a “contract between the health insuring organization and the policy holder. The policy holder may be an individual or an organization, like an employer” (Claxton & Lundy, 2008). In the U.S., private insurance includes a number of different forms (PPOs, HMOs, POS, HDHP/SO, HASs, HRAs and conventional fee-for-service insurance). State regulations vary widely for the terms of market competition in

the independent health insurance sector in the U.S. In addition, the states have substantial power to design and implement regulations, though the federal government's rules always take precedence. Some states have guaranteed issue for small businesses, but not for individuals. A few states limit the premiums insurance companies can charge, while others require guaranteed renewability (Claxton & Lundy, 2008).

**The U.S. state of Massachusetts** is experimenting with private health insurance and individual mandates. Its health reform plan was implemented to achieve universal health insurance by requiring that all its residents obtain health insurance, one way or another, on the independent market private insurance market, by themselves, or through their employers. Those who cannot afford it are exempt. A new organization, The Commonwealth Health Insurance Connector was established to assist individuals and small businesses to obtain health insurance at a reasonable price. Massachusetts also includes government subsidies for the very poor to help with the purchase of health insurance. The state of Massachusetts has increased access to health insurance and reduced the number of uninsured substantially (Gold, 2008; Steinbrook, 2008).

### 3. TESTING THEORY - RESULTS

#### ***Testing Theory: Propositions about Health Insurance Costs and Market Competition in the Health Sector***

- 1) The hypothesis, *If there is market competition in the health sector, then costs will be contained*, can be re-stated as follows: cost containment (B) will exist only if market competition (A) is present. If this is observed in our case studies then A is said to be a *sufficient condition* for B, or “if there is A, then there will be B.” Alternative formulations of the relationship are: “If there is A there must be B” or “A is enough for B” (Dul & Hak, 2008, p 67-8). From Table 2 it is clear that this is not the case. In none of our five principal cases was market competition and cost containment observed to occur together. Market competition is not a sufficient condition for cost containment.
- 2) In examining whether market competition is a *necessary* condition for cost containment the logic is somewhat different. This implies “B exists only if A is present” or “B does not exist without A” etc. (Dul & Hak, 2008, p 68-69). Since this study focuses on the effects of market competition (A), it is difficult to accept or reject this hypothesis based on the five principal cases because they all had ongoing policy experiments with market competition. To test the hypothesis further more than one value of the independent variable, market competition, is helpful (Dul & Hak, 2008, p. 80-81). Many OECD countries in the industrialized have **no ongoing experiments with the market**; additional observations from this population of industrialized countries can be used to test whether or not market competition is a necessary condition for cost containment.

Among several OECD countries that did **not** experiment with market competition in the health sector (A) some achieved cost containment for varying time periods. The annual excess growth in health spending per capita was below zero for Ireland, Finland, Denmark and Japan between 1985 and 2002. In addition, it was less than ½ of one percent for Sweden, Luxembourg, and Canada (White, 2007, p 159). Also using OECD data, but different statistical techniques, another study reported that Denmark, Finland,

Italy and Sweden had average annual growth rates in per capita health expenditures below 2% between 1990 and 2003 (Kaiser Family Foundation, 2007). This is close to inflation levels. If only **one case** in the population fails to support a hypothesis, then the hypothesis must be rejected (See Table 2). Given these results it **cannot** be said that market competition is a *necessary condition* for cost containment.

The results from our 5 principal cases and the additional information from OECD data for other countries suggest that **market competition is not a sufficient or necessary condition for cost containment**. The proposition that market competition contains costs must be rejected. Theories that assume there to be a relationship between the two should be reformulated to take this into account. In each of the five cases, the presence of market competition preceded the observed effects on cost containment. From a temporal point of view, in each case, costs have increased since market competition was implemented. The introduction of A was prior to the measurement of B and this implies a causal link.

We also tested an additional hypothesis from theory: *Regulation of market competition in the health sector is required for costs to be contained*. However, even when closely regulated, market competition is neither necessary or sufficient for cost containment across all case studies examined here. Regulation is not an intervening or moderating variable between cost containment and market competition.

### ***Testing Theory: Propositions about Access and Market Competition in the Health Sector***

Theories of market competition propose that: *If there is market competition (A), access (B) will be improved or if already high, then it will be maintained*. This hypothesis is not supported by the case studies considered here (Table 3). In many cases, access was maintained after market competition was initiated (Switzerland, Netherlands, Massachusetts and Medicare Advantage plans). But this was not true in the private, independent markets in the U.S., where market competition is observed together with reduced access. These mixed results allow for the conclusion that market competition is **not** a *sufficient condition* for maintaining access in the health sector (Dul & Hak, 2008).

While the cases included in this study all involve instances of market competition, and because information about access in instances without market competition are useful for testing a necessary condition, additional data and observations from other OECD countries are employed as was the case in the previous test. It is evident that several countries do not have market competition in the health sector, yet access is high. Canada and Finland are examples. These and other exceptions permit the conclusion that market competition is not a *necessary condition* for high access.

Given the failure to support the initial proposition of the theory that market competition in the health sector will maintain or increase access, an additional hypothesis is identifiable from practice. Might the proposition that access can be maintained under market competition in the



health sector be reasonable within a restricted, contingent situation, where the market is carefully regulated? This proposition is more complex than the original, hypothesized relationship between market competition and access. It can be re-formulated as follows: *Regulation (C) of market competition (A) is required for access to health insurance to be increased, and if already high, to be maintained (B)*. Each case was assigned a score on the degree of regulation based on criteria outlined in Section 2. Scores varied considerably from case to case; the U.S. private insurance system scored lowest of all on regulation (Table 1). The results of the test as to whether or not highly regulated market competition (AC) is sufficient for access (B) are displayed in Table 5. Here the theory which suggests that there is a contingent variable, regulation (C), involved in the relationship of market competition and access. Only when the market is highly regulated is access maintained or improved.

Results indicate that regulation of market competition is a *sufficient condition* for increasing or maintaining already high access. “If there is AC, then there will be B.” If the market is highly regulated, then access is maintained or increased. In no case is AC present (highly regulated market competition) and B absent (access not increased or maintained). It is not possible to test whether highly regulated market competition is a necessary condition, increasing or maintaining access, because there are no cases in the population of industrialized countries where regulation of market competition is low but access is still maintained.

It is also likely that the relationship between regulated market competition and access is deterministic. Across the 5 cases, as the score on regulation rises, access approaches 100% (See Figure 1).

### **Testing Theory: A Proposition about Quality Improvement and Market Competition in the Health Sector**

The hypothesis that *if there is market competition, quality of health care will be improved cannot be affirmed or rejected* because there is no reliable information on the relationship between the two in any of the principal case studies examined here or in other OECD countries. Switzerland and the Netherlands are typical: “Since Switzerland does not have a national information system to generate quality-of-use indicators and information on quality is generally scarce, quality of service provision is hard to judge” (Leu, Rutten, Brouwer, Matter, & Rutschi, 2008, p23, 115). In the Netherlands ,quality ratings for consumers are only beginning to be available. Web-based quality information is “imperfect, not comprehensive, and not user friendly enough so far” (Gress, 2006; Leu et al., 2008, p 143).

## **4. DISCUSSION**

### **Costs**

In all cases, whether regulated or not, market competition has failed to contain health systems costs. The health systems that have the most extensive market experiments, the U.S.,

Switzerland, and Netherlands, are among the most expensive per person, per year in the world (Scanlon, Swaminathan, Chernew, & Lee, 2006). In each of these countries policies based on market theory have been employed in an effort to control costs. But market competition has rarely coincided with lower costs or a reduction of the rate of health system cost-increase. The market is, rather, associated with escalating health system costs (Callahan & Wasuna, 2006; Custers, Arah, & Klazinga, 2007). The experiment with market competition in the health insurance market in the Netherlands conforms most closely to market theory as regards optimal economic structures (Enthoven & Van de Ven, 2007). Yet costs have continued to increase in this country since the market-based reform was initiated in Holland in 2006. In 2007, health care costs increased 5.1% (Centraal Bureau voor de Statistiek Persbericht - Statistics Netherlands, 2008). This cannot be attributed to insurers' excess profits because insurers have lost money on the sale of basic health insurance policies for every fiscal quarter since the reform was inaugurated in 2006 (P. Rosenau & Lako, 2008). Other reasons, such as volume increases, may explain the absence of cost containment (Centraal Bureau voor de Statistiek Persbericht - Statistics Netherlands, 2008).

Results with the Medicare Advantage experiment in market competition in the U.S., similarly, have been disappointing as regards cost control (Kaiser Family Foundation, 2008a). Medicare Advantage is less efficient than traditional Medicare (Kaiser Family Foundation, 2008c). It has also failed to reduce the cost-growth of the Medicare program (Kaiser Family Foundation, 2008d; Steffie Woolhandler & David Himmelstein, 2007; Steffie Woolhandler & David Himmelstein, 2007). The U.S. government has subsidized private sector insurance companies participating in the private Medicare market; Medicare Advantage receives payments 10-15% higher than those paid to government-managed traditional Medicare providers. These subsidies are given despite the fact that private Medicare in the U.S. attracts healthier individuals than traditional Medicare (Kaiser Family Foundation, 2008a) and that private Medicare Advantage patients are often encouraged to return to traditional Medicare program if they become seriously ill (Morgan, Virnig, DeVito, & Persily, 1997; Walsh, 2008). Because Medicare Advantage constitutes 31% of the "revenue for health insurers that offer such plans" it will be very difficult for U.S. policy makers to remove these extra payments through legislation to do so is proposed in Congress (Kaiser Family Foundation, 2008b).

There are several possible explanations that need to be tested with further research regarding the failure of the market to contain costs as predicted by theory. For example, multiple payers increase administrative complexity associated with the market, the fragmentation of funding streams, and increases in executive salaries are all plausible (Steffie Woolhandler & David Himmelstein, 2007). Administrative costs in the private, for-profit health sector in the U.S. are generally higher than non-profit health sector administrative costs (P. V. Rosenau & Linder, 2003). Another hypothesis is that maintaining a level playing field for competition in the health sector is proving to be expensive (monitoring insurer behavior, provider quality, etc.). Policy makers in Switzerland and the Netherlands agree that because competition is imperfect,

regulatory intervention is necessary. While not all health systems that have experimented with the market have actively intervened to hold competitors to fair competition standards, these two countries have made the effort (Leu et al., 2008). Policy makers face a difficult choice; monitoring and regulating market competition is expensive, but without it access is less likely to be maintained and this could increase the number of uninsured and result in increased health system costs in the future.

Another explanation for the failure of the market to contain costs is that the health sector is an imperfect market involving major externalities not present in other economic sectors (P. Rosenau, 2003). Some such factors included: information asymmetry, inelastic demand, monopoly status for some specialized services and for pharmaceutical products (brand names), the fact that consumer tastes are not predetermined as regards health, the fact that patients are not good judges of what is best for them as regards health services, the fact that individuals are not always rational, etc. In the health sector, the general social welfare is not maximized by each actor pursuing his or her self interest in the competitive marketplace (Rice, 2002).

Making a profit in the private sector health marketplace, doing better than one's competitors, can be accomplished in several ways. Offering goods and services at lower prices is one way. But increasing the volume of services provided is an additional means to the same end. Over time greater volume increases societal health care costs dramatically. "Success" then in the latter case, is achieved by expanding the customer base, increasing demand, and using knowledge about consumption and purchasing to increase "sales" through aggressive marketing and advertising. Marketing and advertising are a means to increase demand, viewed as essential to successful business enterprises and to the functioning of the marketplace. However increasing demand is *not* merely about movement along the demand curve; or only about an increase in quantity or a change in the price of a service or good. It is about shift in the demand curve "to the right," an increase in the quantity for a good or services at every price on the curve. This raises this curve but does not change the slope, resulting in an *increase in overall health system costs* (Stiglitz, 1997).

Unqualified consumers, inexperienced providers and other stakeholders without much experience with market competition may make it easier to create a demand for services with unanticipated consequences. In some cases, this increase in the volume of health services is appropriate. In other cases, unneeded and even inappropriate care is encouraged and market competition is poor at sorting out the two. Sometimes, what constitutes superior health care is not known. By some estimates, as much as a third of all expenditure in the health sector in the U.S. are without benefit to the patient (RAND Health, 1998; Winslow, 1988). From the point of view of the society, it is not in anyone's interest to give customers what they do not need and should not want.

Market competition may increase health system costs by reducing cost effective cooperation between providers in local markets, thus duplicating resources; for example, when

market competition in the hospital sector was implemented in the Netherlands, hospitals in a region each bought new equipment or updated equipment rather than practice the historical norm of referrals with specialized services being center in one local hospital or another.

A final hypothesis as to why market competition has failed to contain costs in the health sector is that the market remains too restricted; in short, there is still too much regulation. Advocates of this view argue that only when regulations of the free market are removed entirely will costs be contained (Colombo, Zurn, & Oxley, 2006). One specific complaint has to do with the fact that insurance companies are not negotiating rigorously enough with providers, doctors and hospitals. There are calls to permit this where it does not yet exist, for example, in Switzerland (Leu et al., 2008) and to increase the scope of selective contracting where it is already permitted (Netherlands). This proposal assumes a direct “dose-response” relationship between market competition and cost control; reducing regulation is predicted to decrease health sector costs. However, no evidence of a dose-response effect was observed in this research. Costs increased in all observed health system experiments with market competition across widely varying levels of regulation.

### **Access**

The theory that market competition with little regulation will assure access in the health sector has little support in the literature (Barrilleaux & Brace, 2007), despite the strong theoretical arguments for it (Enthoven & Singer, 1995; Herrick & Goodman, 2007). Theory here needs to be revised. In the U.S., increasing market competition has been accompanied by reduced levels of health insurance in the population (17%) and increased under-insurance (29%) over time (Consumer Reports, 2007) and these rates are on the increase (Schoen, Collins, Kriss, & Doty, 2008). Employers are assigning larger and larger proportion of the health insurance costs to employees by way of increased co-pays, deductibles, etc. (Mishel, 2006; Regopoulos & Trude, 2004). This reduces access for vulnerable populations and has negative consequences for general population health (Rice, 2002).

Results reported in this study suggest one such revision to the theory of market competition with regard to access. Regulation of market competition can preserve or increase access. Without regulation, competition in the health sector is about which insurance company is too often about “gaming” the market system and achieving profits by avoiding the most costly patients. Such tactics include: “practicing risk selection, limiting the services covered, constraining payments to providers, and shifting costs to patients” (Kuttner, 2008, p. 549).

### **Quality**

The theory of market competition in the health sector holds that measuring and publicly reporting quality is critical for the market to function properly (Herrick & Goodman, 2007). Consumers/patients, it is assumed, will then choose their health insurance and provider, at every

price level, on the basis of publicly available quality data information (transparency). Individuals and group consumers of health insurance will search out the best value in the marketplace. They will be able to identify the best quality for a given price, and purchase it, rather than an inferior quality product. This theory has been studied for several health subsectors and for specific health products, and specific providers types (Lako & Rosenau, 2008).

However, little research on the relationship between market competition and quality is available to test this aspect of market theory. Market competition offers few incentives for insurers and providers to focus on quality (Callahan & Wasuna, 2006; Custers et al., 2007) though this is changing as financial incentives are increasingly offered to providers to improve quality in many industrialized countries. There is evidence that these efforts are effective but no indication that they are successful within the context of market competition (Schoen et al., 2007).

Overall, the general conclusion of policy experts, however, is that “there is no clear international evidence that increased competition amongst insurers would improve the quality or efficiency of care” (Colombo et al., 2006). Neither does market competition in the health sector coincides with reductions in mortality amenable to health care, an important indicator of quality (Nolte & McKee, 2008). One major study reports that market competition has *not* been found to be associated with better quality performance measure by improved HEDIS scores on chronic care measures in the U.S. HMO market (Scanlon et al., 2006). An additional problem with testing how market competition influences quality is that, some of the readily available quality indicators lack validity. For example, the speed with which health care claims from providers are processed is adopted is considered to be a measure of quality (Leu et al., 2008).

## 5. CONCLUSIONS AND IMPLICATIONS FOR THEORY

Translating evidence into policy is a popular innovation in the health sector in industrialized countries. If policy makers are armed with research results better legislation might be adopted (Lavis, Robertson, Woodside, McLeod, & Abelson, 2003). This research is theory-oriented with an ultimate goal of producing knowledge that is useful for practice in the form of policy-making in the health sector.

The qualitative case studies examined here suggest that market competition in the health sector fails to perform as theory predicts. On balance, after several decades of experimentation in many industrialized countries, it can be said that market competition is not necessary or sufficient for cost containment. Neither does it improve or increase access in the absence of high levels of regulation. Some of the several possible explanations as to why the expected benefits of market competition in the health sector have not been observed were discussed above.

It is hard to justify prolonging the experiment with market competition in the health sector at this point because the premises of the theory associated with it are inaccurate. Are policy makers who continue to pursue market based policy in the health sector implementing an

“essentially speculative scheme,” (Callahan & Wasuna, 2006), based on preference, and perspective, rather than research results?<sup>2</sup>

## 6. Limitations

All approaches, and even the best designed scientific research, are potentially subject to revision in light of new evidence from as yet to be conceived experiments, and additional practical, real world experience. The results reported here rely on the adequacy of observation and the accuracy of measurement for the several variables analyzed. Errors with regard to measurement could change the overall conclusions. The cases may not be representative of the domain and if this is true the results cannot be generalized to other industrialized countries. Even though most ongoing instances of market competition in the health sector in industrialized countries were included in this study, the cases available to be considered do not constitute a random sample. The research reported here tests the theory of market competition, across several different periods of time, from decades in the case of the U.S. to two years in the case of the Netherlands and Massachusetts. Other time periods going forward could yield different results. The findings reported here are also limited because other variables may exist that were overlooked and that account for the results. Finally, countries differ as to culture, institutions, history, and political choices and this cannot be fully taken into account in the assessment of the cases studied.

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<sup>2</sup> Ultimately, policy regarding market competition in the health sector may be about more than methodology or research results. Evidence, when it is available, may not be incorporated into policy because of the nature of the political process itself. Policy makers, understandably, focus on political priorities above empirical data even when findings are clear. Still why policy makers are not more responsive to voter sentiment is unclear. Public opinion polls across many nations find that the health sector is not viewed as a legitimate area for market competition (Laugesen, 2005).

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