

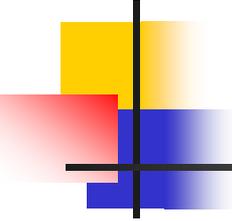
Enhancing Access to Government Information: Economic theory as it applies to Statistics Canada

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4 February 2008

*Socioeconomic Effects of
Public Sector Information*

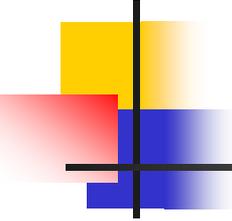
OECD Paris



The study:

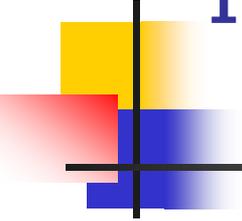
- *Economic Theory as it Applies to Statistics Canada: A Review of the Literature*
- Kirsti Nilsen. Toronto, 2007, 114 p.
- Statistics Canada contract

- <http://www.chass.utoronto.ca/datalib/misc/Nilsen%20Economics%20Paper%202007%20final%20version.pdf>



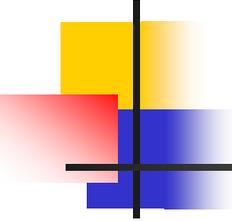
Goals of this contracted research study

- Complete an authoritative review and analysis of current economic theory
- Review the literature on the economic theory of information
- Identify elements of that literature that are relevant to management of the production and dissemination of official statistics in Canada



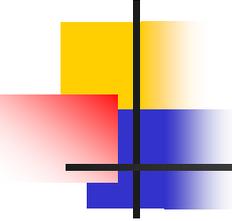
Including...

- Economic rationale for...
 - government intervention in the statistical information market
 - public sector supply of official statistics
- Economic theory with respect to...
 - the pricing of information and information goods
 - the advantages of public over private sector supply of information
- Impact of information on general economic efficiency
- Determining the appropriate level of production of official statistics



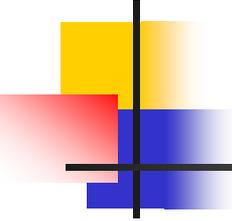
Goals, continued

- Summarize significant implications of the theory for Canada's national statistical program
- Review Statistics Canada's production and dissemination program in light of the above
- Identify areas where Statistics Canada's program could be argued to be sub-optimal in light of the identified theory



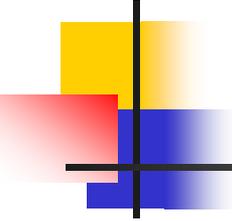
Audience

- Statistics Canada
 - specifically Assistant Chief Statistician Wayne Smith; Communications and Dissemination Team
- Statistics Canada decision makers
- Official statisticians
- PSI policy community



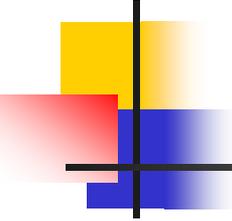
Impact of study

- Within Statistics Canada? too soon to tell.
- PSI workshop
- Forthcoming articles:
 - *Journal of the IAOS* 24 (2007) 1-16
 - *Annual Review of Information Science and Technology* (2008 or 2009)



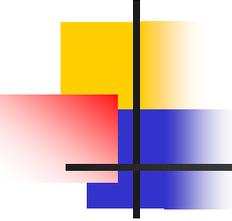
Methods

- Identify and review literature
 - Specifically focusing on
 - economics, broadly
 - economics of information
 - economics of public sector information
 - economics of official statistics
- Synthesize and report



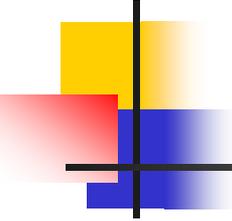
Methodology and Findings

- Replicable
- Results are reliable and satisfactory
- The literature reveals that...



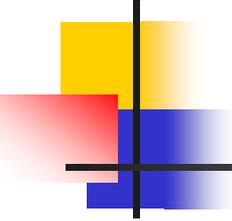
Theoretical economists...

- do not focus on the financial situation of individual organizations;
- are concerned with economic and social welfare of society as a whole;
- believe that economic efficiency is achieved when goods and services that are produced *do* exchange hands, avoiding wasteful overproduction and fulfilling consumer wants, desires or preferences



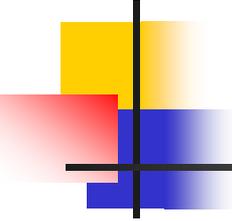
Theoretical economists...

- consider externalities;
- argue that cost-recovery and user fees are *never* welfare enhancing;
- believe that taxation has distributive benefits across society



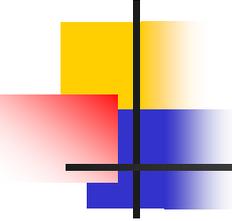
According to economists, public goods...

- can be consumed by many without detracting from benefit enjoyed by others
 - (non-rivalrous and non-excludable)
- can be produced by the public or private sector
- Private sector will not supply enough of those with social benefits for which there is no market or sufficient revenue
- Herein lies the justification for public sector supply of public goods



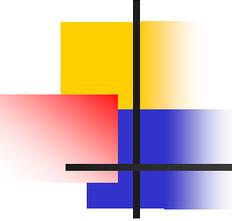
Some public goods are *made* rivalrous and/ or excludable

- Information can seldom be made rivalrous but it can be made excludable by
 - Pricing
 - Copyright
 - Failure to print (in paper or electronically)
 - Failure to provide access



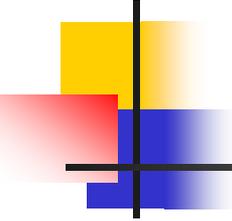
Pricing non-rivalrous public goods

- *Never* efficient because
- some people are prevented from enjoying the benefit of the good even though their consumption of the good would have little or no marginal cost to the producer



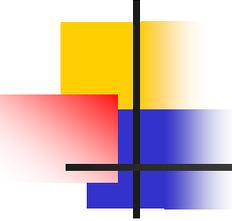
Pricing implies that information is a commodity

- But it is difficult if not impossible to identify information as a commodity
- because of its characteristics:
 - easily shared
 - difficult to appropriate, measure, value,
 - therefore difficult to cost and price



Information production

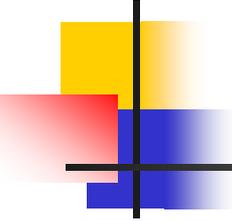
- High fixed costs and low or no marginal costs
(first-copy costs are sunk costs)
- Wide dissemination does not increase costs to producer
- Leads to monopolistic provision of information goods by those who can take advantage of economies of scale
- Private sector monopolists under-produce and over-price
- PSI producers are usually monopolists
 - (Shapiro & Varian, 1999)



Why is pricing above marginal cost inefficient?

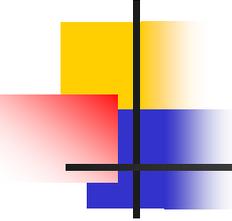
- Results in a deadweight loss
 - Loss of consumer and producer surplus
- Some items will be produced and not sold
- Units that have benefits greater than their costs are not purchased

- There is no net social benefit



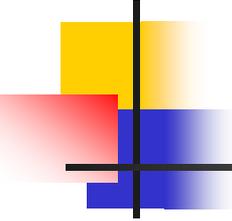
Public sector pricing

- It is claimed that user fees are based on marginal costs or on cost-recovery pricing
- However, the price is always a political decision
- Price is arbitrary



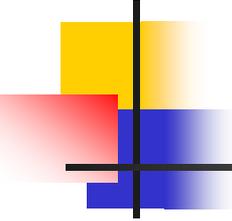
Why does public sector want to impose fees for information?

- Recover costs
- Generate revenue
- Based on the “benefit principle”
 - Those who benefit from a good should pay for it
 - but note that benefit is difficult or impossible to determine
- What is the alternative?
- Taxation, with its greater distributive benefits, can be “unambiguously welfare improving”
- (Stiglitz, 1994)



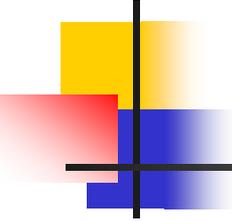
Some countries impose Crown copyright

- to “ensure integrity and authority”
 - “blunt instrument” (*see* E. Judge, 2005)
 - could use moral rights provisions of Copyright Act
- to generate revenue
 - by adding value to their own information
 - by licensing others to add value
- But Crown copyright has social costs and negative economic impact



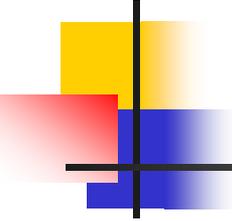
It is argued that

- If a government role is warranted in any activity, then seeking to generate revenues means that an agency is not fulfilling its mission
- If no government role is warranted then
- the activity should be undertaken by the private sector
- (Stiglitz, Orszag & Orszag, 2000)



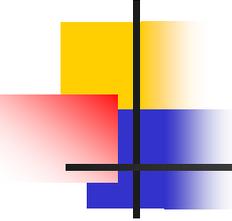
Economic effects of PSI on digital networks ...

- It is a proper government role to:
 - provide public data and information
 - support basic research
 - improve the efficiency with which governmental services are provided
 - (Stiglitz, Orszag & Orszag, 2000)



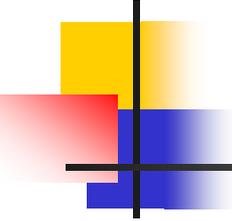
However, PSI providers

- should exercise caution in adding specialized value to public data and information
- should only provide a service on-line if private provision would not be more efficient
- should ensure that mechanisms exist to protect privacy, security and consumer protection on-line
- (Stiglitz, Orszag & Orszag, 2000)



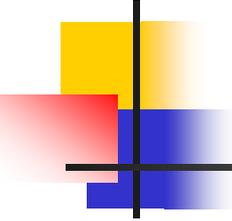
In the presence of network externalities and positive feedback “private markets are not necessarily efficient”

- the “superstar” phenomenon generates substantial income inequality and excessive investment in the attempt to become the best in a specific field, which “can be inefficient from a social perspective.”
- “the high fixed costs and low marginal costs of producing information are associated with significant dangers of limited competition.”
(Stiglitz, Orszag & Orszag, 2000)



Stiglitz, Orszag & Orszag believe that

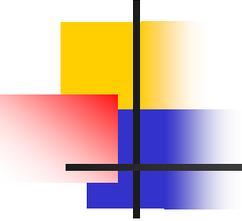
- the theoretical underpinning behind private versus public production shifts as the economy moves toward a digital one;
- the movement toward an information-based economy implies an expansion of public goods, which may be inconsistent with a laissez-faire approach to economic activity;
- this expansion suggests a larger public role in the digital economy



Implications for Statistics Canada

- of moving to free dissemination...
- Revenues will decrease
- Usage and re-use will increase
 - positive externalities
 - positive economic impact
- Transaction costs will decrease
- Opportunity costs to users and to the agency will decrease

Thank you



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