

The concept and commodity of official statistics

Asle Rolland

Maries gate 7C, N-0368 Oslo, Norway

Tel.: +47 45 00 49 37; E-mail: rolland.asle@gmail.com

Abstract. New threats and opportunities make it imperative to rethink the foundations of official statistics. This essay examines the industry's freedom of action. It identifies four ways of defining official statistics and considers their impact. It treats official statistics as a commodity, and the prospects of trading the commodity are examined relative to the concepts of public and private goods, merit goods and the common good, goods versus services, search, experience and credence goods, semi-finished and finished products. Product quality is discussed relative to the quality criteria of conformance to specifications and fitness for purposes, and the means to achieve quality are discussed as standardisation and customisation. The means determine the comparability of the statistics, and comparability determines the opportunities for perfect and monopolistic competition. The essay notes that the official statistics industry empowers those who compare, but also that it makes an exception for itself. Finally it is suggested that the biggest threat to the statistical agencies may not be the coming of competition but inability to rejuvenate the product set due to confinement in the state's bureaucracy.

Keywords: Public good, private good, merit good, common good, quality, comparability

1. Introduction

There is unrest in the official statistics camp. A digital data deluge sweeps away monopolies; budget constraints prevent the statistical agencies from exploiting the new opportunities; competitors move in to fill gaps between demand and supply. Faced with the threat of obsolescence the statistical agencies have started to modernise their production and services. Incidentally the analysis above stems from an institution set up in response to the challenge, the High-Level Group for the Modernisation of Official Statistics (HLG-MOS) [1]. Similar analyses have been made by the EU [2] and by the European Statistical System (ESS), the partnership between the European Commission (Eurostat) and the statistical authorities of the Member States [3].

The challenges make it urgent to rethink the foundations of the industry. This essay is a contribution. It examines the concept and commodity of official statistics. The objective is to identify and assess the freedom of action that exists, in theory and practice.

2. The concept

In public law the concept of official statistics is reserved for the statistics of the state. The law has etymology on its side. "Official" refers to that which belongs to an office and is carried out by virtue of its authority. "Statistics" originated as a term for the science of the state.

Official statistics is however defined in at least four different ways. They relate to the communication concepts of producer, publisher, content and consumer. The Norwegian and Swedish acts exemplify three of them. The fourth is exemplified by the HLG-MOS.

The full title of the Norwegian official statistics act is "act relating to official statistics and Statistics Norway." However, the act does not reserve the official statistics term for that agency. Instead it defines 'official statistics' as "statistics which are made available to the public by Statistics Norway or another state agency." The act is an example of definition by publisher.

The Swedish official statistics act makes a distinction between "official" and "other" statistics dissemi-

nated by public agencies. The government decides in which issue areas and statistical areas there shall be official statistics and which authorities are responsible for its provision; currently there are 27 of them. The statistical system is thus decentralised from above. The responsible authorities determine which statistics shall be produced within this framework. When official statistics are published they shall be identified by the accompanying phrase “Official Statistics of Sweden” and/or the symbol for it. The Swedish act is an example of definition by content.

Sweden provides also an example of definition by consumer. Not all consumers, but official consumers, provided they are located outside Sweden. A guideline put forward for use of the official statistics label proposed that statistics reported to organisations like the EU should be official statistics. A review of the Swedish system indicates however that the proposal was never fully implemented, what the reviewer finds regrettable and suggests it should be [4].

This leaves the definition of official statistics by producer for the HLG-MOS. Appointed in 2010 by the UNECEs Bureau of the Conference of European Statisticians (CES) it developed a vision and strategy for what it labelled “the official statistics industry”, the members of which are the “statistical organisations”. What is meant by that is clarified by the organisation for its collaborators, the Statistical Modernisation Community, which “is open to any organisation responsible for the production of official statistics” [5].

“Publisher” is the *inclusive* definition of official statistics. All statistics published by all state agencies are covered by that definition. Covered are thus centralised and decentralised statistical systems, state agencies that publish statistics as a primary and a secondary activity, statistics that are published regularly and never repeated. Typically the Norwegian act identifies one central actor with duty to publish statistics regularly as a primary activity – Statistics Norway – but takes into account that any state agency may publish statistics as a secondary activity, regularly or occasionally. They decentralise the statistical system from below.

Publisher is the definition that accords with the meaning of “official”. Any information that a state agency publishes on a topic under its authority is official for that topic; so is the statistics it publishes on the topic. The total output of official statistics may thus be decentralised in terms of publishers despite being centralised in terms of publications. Statistics Norway publishes 85–90 percent of Norwegian official

statistics; many state agencies publish the remaining 10–15 percent (fairly regular publishers are the nine listed by the ESS and the 20+ that are members of the Norwegian Statistics Council). The Herfindahl index could be used to measure the degree of centralisation – although the proper term there would be concentration – but the index presupposes that competition is the desired condition. In official statistics competition is the unintended and undesired effect of uncoordinated agencies publishing statistics on the same topic. It is economically undesired for efficiency reasons and politically undesired for casting doubt on which statistics should be the official one, whereby it undermines the authority of official statistics. In official statistics a division of labour between the suppliers is thus the desired condition. In the market, which is subject to competition law, division of labour is illegal cartel activity.

When official statistics is defined by publisher the producer may be the state agency itself, which is likely to be the case for statistics based on its administrative records, and it may be a private market research company if the statistics are based on sample surveys. The definition implies that whoever produced the statistics the publishing state agency assumes responsibility for them. Pursuant to the Norwegian act the sole right to make decisions on the *production* of official statistics is however delegated to Statistics Norway, which also is delegated the sole right to impose an obligation to provide information and to sanction offenders. To the extent that the quality of the statistics depends on the response rate it is thus a legal provision that makes the products of Statistics Norway better than those produced by other suppliers of the state agencies.

“Content” is the *divisive* definition of official statistics. Statistics are divided into “official” and “other”; publishers are divided into state agencies with and without responsibility for official statistics. Regarded from the publisher perspective the definition implies that some state agencies only publish statistics for which they do *not* assume responsibility – the statistics are not official – and that the agencies that do assume responsibility do it only for a part of the statistics they publish, the part that the government has decided they shall assume responsibility for. Hence they do not assume responsibility for the part they are solely responsible for themselves. Like agencies without responsibility for official statistics they can only assume responsibility for “other” statistics informally, whereby the “other” statistics become official unofficially.

The reviewer of the Swedish system asserts that at least in Europe the Swedish definition by content is

an exception to the rule, which is to treat all statistics from state agencies as official statistics. The rule is then said to encompass both the publisher and the producer based definitions. The reviewer argues for the superiority of the Swedish approach, but admits that the Swedes are not alone to understand this better than others, because a similar approach can be found in the United Kingdom. The Brits are said to define “official statistics” in accordance with the European general rule, but some of the UKs official statistics are labelled “National Statistics”, and that term is said to serve the same purpose as official statistics does in Sweden. The Swedish account of the British official statistics concept is however inaccurate. Official statistics is in the UK defined in terms of producer, and apparently the producer can be any state agency – the act lists the Statistics Board, a government department, the administrations of Scotland, Wales and Northern Ireland, “or any other person acting on behalf of the Crown” – but their statistical products are not all automatically official statistics. That is to be decided by the Statistical Head of Profession in the producer body, in accordance with the Code of Practice for Official Statistics and with guidance from the National Statistician [6]. Amongst the formal criteria is compilation of the product on regular or recurring basis, which implies that statistics not satisfying those criteria will automatically be “other” statistics. The existence of “other” statistics is thus common to the Swedish and British approach, and so is the right of the responsible local authority to determine which statistics shall be official (in Sweden within the areas determined by the government). It can thus be argued that the closest resemblance between the Swedish and the British approach is at the level of “official statistics”. The British term “National Statistics” seems to identify a quality level that is exclusive for the UK and hence missing in Sweden.

One might expect the term “National Statistics” to be reserved for statistics from the Office for National Statistics (ONS), but that is not the case. Instead it is a marker applied to official statistics that satisfy quality criteria over and above the ordinary standard, and so is said to be the case for “Official Statistics” in Sweden. Nor is the power to assess and designate statistics as National Statistics held by the ONS. It is held by the Statistics Authority, which was established in 2008 by The Statistics and Registration Service Act 2007. The Statistics Authority is a non-ministerial government department directly accountable to Parliament. Non-ministerial departments typically fulfil regulatory or supervisory functions, and their independence is

considered better protected if they report to the Parliament and not to a politically lead ministerial department. Statistics Norway and Sweden report to the respective ministries of finance.

The Swedish and British acts contain no information on what shall distinguish official statistics from other statistics. Both acts contain quality criteria that official statistics must satisfy, but the reviewer of the Swedish system asserts that historical traditions rather than quality or content determine which statistics the responsible authorities identify as official. It would also be unfortunate to reserve the quality criteria for the official statistics, as thereby the “other” statistics from the same suppliers would automatically receive a marker for poor quality. In practice the suppliers must therefore ensure that all statistics, official or not, satisfy the same quality criteria.

Thus if statistics should become official for other than historical reasons it must be content that identifies them. In that respect Sweden and the United Kingdom seem to have chosen diametrically opposite solutions. The reviewer of the Swedish system asserts that in Sweden the term official statistics is reserved for statistics considered to be of particular importance for the description of society. The National Statistician of the UK identifies seven subject matters that qualify statistics for the label of official statistics, and common to them is the likelihood that the statistics will make an impact on politics, economics and public debate. The Swedish approach indicates that in Sweden statistics can be official if they are uncontroversial; the British approach indicates that in the United Kingdom statistics should be official if they are controversial. Swedish official statistics should therefore be acceptable to all without objections, while British official statistics will be accepted by all only if they are backed by the authority of that label, and perhaps not even then. Sceptics are inclined to presuppose that there are two kinds of truths, the truth and the official truth.

“Producer” is the *exclusive* definition of official statistics. It reserves the term for authorities that are designated by their superiors to be responsible for the production of official statistics. The European statistical law states in article 5 that “the Commission (Eurostat) shall maintain and publish on its website a list of NSIs and other national authorities responsible for the development, production and dissemination of European statistics as designated by Member States” [7]. In order to enter that list other national authorities than the NSIs (national statistical institutes) must exercise public authority, have production of statistics included

among their tasks in their basic act, and have been given the national responsibility for the production of a specific and identifiable part of European statistics.

According to the UNECE's website the task of the HLG-MOS is to promote standards-based modernisation of official statistics. There is however no standard definition of official statistics and the definitions that exist serve various purposes, all commendable. Perhaps the UNECE is merely hosting the activities of the HLG-MOS, and awaiting the conclusion before they make up their minds about them. Or perhaps the UNECE wants "producer" to be the standard, and perhaps that standard is supported by the producers who benefit from it. Via the UNECE the standard seems to have the support of the UN; via the ESS it seems to have the support of the EU.

There will however be no standards-based modernisation of official statistics unless national definitions are overruled. In countries with "publisher" as definition there will otherwise be official statistics that are inconsistent with the standard; in countries with "content" as definition there will otherwise be unofficial statistics that are consistent with the standard. Overruling national definitions, enshrined as they are in legislation, is politics. The initiative of the UNECE and the CES thus raises the question of politics and statistics as ends or means. The initiators may consider political change as a means to a statistical end, standards-based modernisation of official statistics. They may also consider standards-based modernisation of official statistics as a means to a political end. Standards empower those who compare at the cost of those who are being compared.

3. The commodity

3.1. *Public good, private good*

Given that commodities are products made for sale the official statistics industry will probably argue that official statistics is not a commodity at all. Instead it is a public good. That term has two meanings, one colloquial and the other scientific. According to the colloquial meaning "a public good is a good produced by the government and generally available for the benefit of its citizens" [8]. According to the scientific meaning, introduced by the economist Paul Samuelson in 1954 [9], a public good is a good that is both non-excludable and non-rivalrous in consumption. Fresh air is an example. So is however also polluted air; hence

the scientific meaning has a normative counterpart, the public bad. In terms of availability for consumption the counterpart to the public good is the private good, which is both excludable and rivalrous in consumption. Half public, half private are club goods, which are non-rivalrous but excludable [10], and common pool resources, which are non-excludable but rivalrous [11].

Many statements of the official statistics industry indicate a colloquial understanding of the public good concept. Thus Statistics Norway states that "official statistics are a public good that everyone shall have equal access to" [12]. The assertion is that everyone shall have access to official statistics because it is a public good, not that official statistics is a public good because everyone has access to it. The ONS makes clear that "the statistics we produce are designed to meet the wider public good as well as the needs of government" [13]. Eurostat maintains that European statistics "represent a public good providing a basis for the smooth functioning of democracy" [14]. Destatis writes that "as a rule, official statistics are a public good and available to everybody" [15]. The goodness of official statistics is once more pivotal: They "form part of the informational infrastructure. In the area of politics, administration and business, they enable us to respond more rapidly to new framework conditions and to assess whether our actions are having the desired effect."

Prior to these statements the ESS Leadership Expert Group (LEG) on Quality had set out to explain "the nature of the product 'statistical information'" [16]. The product is of a complex nature, "for 'statistical information' can be provided both as a public good and a private good". As a public good it is made "available to all citizens" and "provides an informational infrastructure for democratic societies and their decision processes." As a private good it is "tailor-made" for individual customers and produced on their demand. By satisfying demand in that way "NSIs are doing something quite similar as information providers in the private sector."

The LEG describes here public and private goods as two ways to exert producer freedom of choice. The NSIs can choose to make the statistics available to all citizens, whereby they become public goods, and choose to make them available only to individual customers, whereby they become private goods. This is the colloquial understanding of the public good concept.

But then the LEG complicates the matter by introducing the scientific concept. The producer is free to

choose between turning the statistics into public and private goods (where “the principles of the economics of public goods do not apply”), but having chosen to make statistics available as public goods in the colloquial sense they inevitably become subject to “the principles of the economics of public goods” in the scientific sense, as the choice implies that “they (1) cannot, practically, be withheld from one individual consumer without withholding them from others (‘non-excludability’), and if (2) for them the marginal cost of an additional person consuming them, once they have been produced, is zero (‘non-rivalrous consumption’)”. For these reasons the LEG infers that “it is very unlikely that public goods can be profitably provided on a free market”. That is “true for the ‘infrastructure function’ of official statistics as well.”

The LEG treats non-rivalrous consumption and non-excludability as if they have the same economic consequences for the producer. Therefore the Group asserts that non-rivalrous consumption, which for the statistics producer is ability to sell the same product to an infinite number of consumers at zero extra costs, makes it very unlikely that official statistics can be profitably provided on a free market. Others will in non-rivalrous consumption see the potential for unlimited economies of scale and equally unlimited excess profit. One may therefore wonder what the LEG has in mind. Either the Group has misunderstood the logic of non-rivalrous consumption or it has in mind the unlikelihood that official statistics will sell enough to cover the production costs; the price will be too high and/or the customers too few.

Non-excludability makes it “very unlikely” indeed “that public goods can be profitably provided on a free market”, as it causes a market failure, the free rider problem, wherefore public goods are frequently provided by governments and funded by taxation. Information that is made available to one may also become available to all, but information must not be made available in that way. Like other information official statistics can also be sold to all citizens as private goods (or as club goods, public in terms of rivalry and private in terms of excludability), and thus cause no free rider problem. At the time when all official statistics were published on paper it was probably more common to sell statistical books and reports as private goods in the scientific sense than to give them away for free as public goods in the colloquial sense. The transition to online publishing enables the producers of official statistics to choose between open and closed access to the products, the former free of charge and the latter in the

form of subscription or pay-per-use. One may therefore once more wonder what the LEG has in mind. The LEG may fear that consumers will exploit the commodity’s public good potential to resell their statistical purchases and thus undermine the market for the manufacturers, but precisely because that is feasible it is catered for by copyright law. Thus if that is not what the LEG has in mind the remaining option is once more its conviction that official statistics will not sell enough to cover the production costs.

The lack of sales potential that is indicated casts doubt on the assertion that official statistics are part of the society’s information infrastructure and *should* therefore be available for free. The truth is rather that in order to become part of the society’s information infrastructure the statistics *must* be given away for free. The message that is sent to those who use price as a proxy for quality is that official statistics is a trivial product, probably not in terms of complexity but certainly in terms of utility. The message that is sent to everyone is that consumption of official statistics is more important for the suppliers than it is for the consumers.

The notion that official statistics lack sales potential is not unfounded. As stated by the HLG-MOS statistics are now everywhere, as threats to and opportunities for the industry, but *official* statistics remains the science of the state. The first of the UNs fundamental principles of official statistics captures this well. The principle opens with the assertion that “official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation.” It ends with official statistics “that meet the test of practical utility” are made available “to honour citizens’ entitlement to public information” [17]. Publication of the statistics serves the open society of Popper [18], but the statistics that are published serve the government and the economy.

Lack of practical utility limits the potential of selling official statistics to the citizenry. Simultaneously it limits the lack of sales potential to the citizenry, because relative to the government and the economy the principle of the UN assumes that the sales potential of official statistics is unlimited. The argument is thus that in order to attract interest from a poor citizenry for whom the statistics are not intended and of little practical utility, wherefore the demand is small, the statistics must be given away for free. Thereby they are also freely available for the affluent consumers for whom they are intended and of great practical utility, wherefore the demand is great and so is their ability to pay.

If official statistics were sold as private goods, the seller would approach two so different markets with the strategy of price discrimination. The strategy would be applied in a number of ways, but it seems sufficient to accentuate the distinction between selling official statistics at a high price to institutions and professional users and at a low price to individuals and non-professional users. The strategy is even compatible with giving statistics away for free after payment of an open access fee.

The appropriating authorities have put the industry under economic pressure. The industry's answer to budget cuts is to cut costs and attempt to produce more for less. Whenever the industry succeeds it confirms that the strategy to exert economic pressure works. Cost cuts thus lead to more budget cuts. The official statistics industry is trapped in a downward spiral and has no strategy to get out of it.

The ruinous outcome of the spiral makes it startling that the industry does not sell its products but gives them away as if they were destined to be public goods. The industry waives revenue which it needs for its own sake and which will also reduce its dependence on the appropriating authorities.

By selling its products the industry will receive revenue also from the citizenry, probably little from each individual but perhaps a lot altogether due to its vast size. That may stimulate efforts to improve the offer to the citizenry, which will increase the revenue from the citizenry, which will increase the industry's independence from the appropriating authorities, and so on in an upward spiral.

By improving its offer to the citizenry the industry will also improve its utility for the democracy. In democracies and autocracies alike the state needs statistics to govern the citizenry. Unique for the democracy is the need of the citizenry for statistics to govern the state. Hence the difference between a democratic and an autocratic service is the existence of official statistics that serve the citizenry [19].

Against the sale of official statistics as a commodity weighs the political argument that the industry has made its own: all official statistics are good for all people and should be available to all people, which they will not be unless they are all available for free without as much as a deductible. Since the production of official statistics is financed by all taxpayers the argument implies that the non-users, light-users and hobby-users of official statistics should subsidise the heavy users and professional users, that individuals should subsidise institutions.

Against the sale of official statistics weighs also that governments may prefer their statistical agencies to be economically dependent on them [20]. Governments may agree with Francis Fukuyama, who in his exposé of the reasons for political order and political decay asserts that "all effective institutions need to have a high degree of autonomy. But it is also possible to have too much of a good thing" [21]. Pursuant to Isaiah Berlin's distinction between negative and positive freedom [22] governments may therefore consider the agencies to have sufficient independence when they enjoy negative freedom from interference and outright censorship, as well as positive freedom to decide the time for release of new statistics, provided of course it is duly announced in advance as prescribed by the European Statistics Code of Practice (CoP) [23].

Against price discrimination weighs the risk that it will be abused, by the customers and/or the manufacturers. Institutional and professional customers may try to obtain price reductions by pretending to be individual and non-professional customers. Producers without commercial motives may have political motives instead, perhaps particularly an ambition to exert political authority by providing and withholding information. Knowing that only what is counted, counts, producers with such ambitions will put affordable prices on statistics that answer questions they like and unaffordable prices on statistics that answer questions they dislike.

Thereto comes that the choice between open and closed access to information is controversial in itself. In academia there is now a movement for more open access, the argument being that closed access is becoming detrimental for the *distribution* of knowledge. In the media there is a contrary movement for more closed access, the argument being that open access is becoming detrimental for the *production* of knowledge. A difference between academia and the media is the importance of revenue from the distribution for funding of the production. The official statistics industry shares the basic source of funding with academia and the potential for collecting revenue from the distribution with the media.

3.2. *Merit goods, the common good*

The idea that all statistics should be available to all citizens, despite their lack of sales potential, draws attention to the notion of "merit goods". According to Richard Musgrave, who coined the term, merit goods are goods "considered so meritorious that their satis-

faction is provided for through the public budget, over and above what is provided through the market and paid for by private buyers” [24]. Arguments for the provision of merit goods are that they satisfy fundamental objective needs rather than superficial subjective wants, and that their consumption has positive externalities that exceed their private benefits for the consumer. Merit goods are assumed to be under-consumed partly because the consumers do not know their own good, partly because they are unable to overlook and take responsibility for the social benefits of their consumption. In the market goods that are underconsumed will also be underproduced. The market then functions as intended at the individual level, but the effect is considered suboptimal at the societal level. Hence the argument is that neither the production nor the consumption of merit goods can be left to the market. Remedies that stimulate both production and consumption are public provision and public subsidies.

The official statistics industry argues as if official statistics are merit goods. Official statistics are “essential for a living democracy” (Statistics Norway), “essential” and “fundamental” (Eurostat), “crucial” (ONS) and “indispensable” (the UN).

Elites and masses are in different position to influence decisions on what shall count as merit goods. The idea of merit goods is therefore criticised for being the means of elites to obtain subsidies from the masses. The argument of the elites is that the goods satisfy the objective needs of all. The counterargument is that those needs are the subjective wants of the elites.

The idea of merit goods is also criticised for being paternalistic. Particularly the claim that the authorities know best what is good for people invites such criticism. Paternalism is however warranted, and criticism unwarranted, when the authorities actually do know best. By stating the principle of professional independence the European statistical law recognises statistics as a profession [7], and professions are supposed to know best what is good for society and individuals in their areas of expertise [25]. Paternalism is unwarranted when the consumer has superior knowledge and when the producer and consumer are equally knowledgeable or ignorant [26]. Conflicts are likely to arise when producers treat knowledgeable consumers as if they were ignorant, and when ignorant consumers demand to be treated as if they were knowledgeable.

The official statistics industry also argues as if it considers official statistics to be a common good, shared by all and perceived by all as beneficial to society. Many will agree with Joseph Schumpeter that there

is “no such thing as a uniquely determined common good that all people could agree on or be made to agree on by the force of rational argument” [27], but that does not prevent providers from marketing their offers as common goods – “the nation’s shared factual basis” (Statistics Norway), its “informational infrastructure” (Destatis, the LEG on quality). Defined in those terms the common good is the negation of the merit good, and so is the strategy for its dissemination. Thus the use of merit goods is sought enhanced by increasing the competence of the users and use of the common good is sought enhanced by decreasing the complexity of the statistics. Together the two strategies may lead to an egalitarian mediocrity of supply and demand. Unless that is achieved, serving the common good may lead to the tyranny of the least skilled over the most skilled, in contrast to merit goods, which may lead to the tyranny of the most skilled over the least skilled.

In terms of comprehensibility the difference between common and merit goods seems to coincide with the distinction that W. Edwards Deming made between enumerative and analytical statistics [28,29]. Deming presupposed that all statistical investigations are carried out for the purpose of rational action. “In the enumerative problem, some action is to be taken because the frequency of some particular characteristic of the universe is found to exceed some critical value”. The action “depends purely on estimates or complete counts of one or more specific populations”, be it people or products. For the enumerative problem it is irrelevant why the people are there, why the quality of the products is high or low. That, however, is the analytic problem. There “action will be taken on the process or cause-system that produced the frame studied, the aim being to improve practice in the future”.

Presumably enumerations are simple and analyses complex. What is simple is likely to be comprehensible to all, and in that sense a common good. What is complex is likely to be comprehensible only to the statistical elite and in that sense a merit good. The provision of analyses is praiseworthy if they serve the interests of all, what the statistical commons have no choice but to trust that they do if the analyses are incomprehensible to them. The provision is acceptable if the owner of the problem that requires analysis pays the costs of having them carried out. The provision is subject to the criticism of merit goods if the owner of the problem succeeds getting the analysis financed through the public budget and thus paid by statistical commons who gain nothing from its solution.

3.3. *Goods and services*

There are indications that the industry considers official statistics to be both goods and services – or it does not bother to discriminate between the two. Thus the task of the HLG-MOS was originally said to be that of modernising statistical production and services. In its vision for the official statistics industry the HLG-MOS sees it as a replica of the automotive industry. “It is not important by whom and where parts are produced. Parts are cheap and available as variants of the same basic design.” Against the HLG-MOS it can be argued that statistics are services. Although “marketing thought generally acknowledges that goods and services are far from being completely independent and distinct entities”, the tangibility criterion has emerged as the definite divisor between them, with goods being tangible and services intangible. According to that criterion statistics are definitely services, and official statistics a public service. However, statistics lack three other properties that frequently are attributed to services, “inseparability (a link between the service and the human providers and customers), variability (inconsistency in the service attributes), and perishability (the incapacity for being stockpiled)” [30]. According to those criteria statistics are definitely goods.

For the distinction between goods and services to be important, goods and services must have other characteristics in common than those that define them, and the characteristics that are common for goods must be different from those that are common for services. Many characteristics are however common for goods and services, although perhaps in different quantities. Thus both goods and services may be search goods, experience goods [31] and credence goods [32]. “Search goods” refers to commodities that let the customer easily inspect their quality prior to purchase. “Experience goods” refers to commodities that do *not* let the customer easily inspect their quality prior to purchase, but after purchase it is easy for the customer to assess it. “Credence goods” refers to commodities that are the negations of both the search goods and the experience goods. The customer is unable to inspect their quality prior to purchase, and it may be difficult to assess it after purchase too.

Statistics are information and information is a search good. Information is however a search good that the seller cannot let the buyer inspect prior to purchase, because then the buyer has got the information for free and the subsequent sale will not take place (the Arrow information paradox) [33]. In order to sell, informa-

tion must therefore prior to purchase be credence good. After purchase it will be an experience good, at least in the sense that the experience will influence whether the purchase will be repeated. Dependency on sale provides thus the seller with an incentive to satisfy the consumer and thereby retain consumer loyalty. There is no such incentive when information is given away for free. Nor does it then matter whether the consumer is in the target group for the information. For official statistics it is an aim to reach consumers even outside the target group, whereby the statistics contribute positively albeit accidentally to the enlightenment of the public.

Its equivocal character makes it the freedom and responsibility of the producer to determine whether the good or service aspect of the statistical product should be emphasised. The distinction resembles that between self-centred and customer-centred enterprises. The main concern of production oriented enterprises is to maximize efficiency, which is achieved by mass production. The main concern of product oriented enterprises is to maximize quality, which is achieved when only the best is good enough. For production and product oriented enterprises alike the main challenge is to make useful what is feasible. The main concern of customer-centred enterprises is to satisfy the market, which is achieved when good enough is best, the quality is right given the price and the price right given the quality. The main challenge is to make feasible what would be useful.

The political superiors of the official statistics industry are sceptical to the customer oriented approach. This is made clear by the European statistical law, where the initial statistical principle of professional independence immediately is countered by the principle of impartiality, “meaning that statistics must be developed, produced and disseminated in a neutral manner, and that all users must be given equal treatment” [7]. For the political superiors the risks that arise from statistics tailored to satisfy the needs of their competitors surpass the rewards that arise from statistics tailored to satisfy their own needs. The principle of impartiality confirms the most significant contribution of psychology to behavioural economics: “bad is stronger than good” [34]. An alternative to the principle of impartiality could otherwise be a principle of balance, meaning that official statistics tailored to serve particular interests should invariably be followed up with statistics tailored to serve the alternatives. The principle of balance would also be more scientific, as it would imply that statistical arguments are to be met with statistical counterarguments, an endless quest for the truth.

3.4. *Standardisation and customisation*

The concept of quality is defined either as “conformance to specifications” or as “fitness for their purpose” [26]. “Conformance” is the quality concept that focuses on the commodity itself. “Fitness” is the quality concept that focuses on the relationship between the commodity and the user. The difference is frequently popularised as “doing things right” versus “doing the right things.” Focus on the commodity makes “conformance” the quality concept of goods; focus on the relation makes “fitness” the quality concept of services. Still the two quality concepts are not the characteristics that clarify whether commodities are goods or services, as they may both conform to specifications and be fit for their purposes. Nor must the concepts be incompatible. Statistics are frequently means to ends. Conformance focuses on the means, fitness on the relationship between means and end. Fitness determines which specifications the means must conform to. The specifications determine whether the commodity is fit for its purpose. The two quality concepts are interdependent.

A greater chance of incompatibility is there between standardisation and customisation. It affects the relation between conformance and fitness, because commodities that conform to specifications are by definition standardised. In order to be fit for their purposes they may have to be customised. Decisive for compatibility is that the users have homogeneous needs. The users can then be satisfactorily served by standardised commodities. “One size fits all”. Standard solutions may even be most fit to satisfy them. They may be most effective in terms of quality and most efficient in terms of costs.

If the users have heterogeneous needs they will however be better served by customised commodities. Customisation is for heterogeneous needs most effective in terms of quality, but probably not most efficient in terms of costs. Customisation is thus likely to cause a discrepancy between effectiveness and efficiency, or between quality and productivity. This discrepancy is more likely to appear for services than for goods, because services depend more on personnel resources for their quality. Hence services are more likely to be arenas for tradeoffs between customisation and standardisation, or between effectiveness and efficiency, quality and productivity [35].

Budget constraints, on the producers or the consumers, may cause customisation, effectiveness and quality to be sacrificed for standardisation, efficiency and productivity. Constraints may also serve as incen-

tives to make customisation more cost effective without loss of quality, particularly by use of information technology. Not least statistical services lend themselves to this.

The primary purpose of official statistics is to serve the professional users such as the “government, industry, academia” (ONS), “politics, administration and business” (Destatis) and “the EU’s strategic objectives” (Eurostat). Professional users are specialised; hence they need customised statistics that are fit for their purposes. Professional users must also compare; hence they need standardised statistics that conform to their specifications. Professional users need the circle to be squared.

The official statistics producers and their political superiors square the circle by making “fitness for its purpose” a specification that statistics must conform to. Involved in the standardisation of fitness is thus one particular group of users, the industry’s political superiors. The outcome is listed in the European statistical law [7] as well as in the CoP [23]. According to the law’s article 12 on statistical quality, “European statistics shall be developed, produced and disseminated on the basis of uniform standards and of harmonised methods” in order “to guarantee the quality of the results.” The following criteria shall apply: relevance, accuracy, timeliness, punctuality, accessibility, clarity, comparability and coherence, to which the CoP adds “reliability.” The criteria focus partly on the statistics itself (conformance), partly on the relation between the statistics and the users (fitness). The law and the CoP thus make fitness a standard for all producers and consumers of European statistics.

Fitness is explicitly present in the criterion of relevance, which in the law is defined as “the degree to which statistics meet current and potential needs of the users.” The CoP states that a service conforms to this specification when “processes are in place to consult users, monitor the relevance and utility of existing statistics in meeting their needs”, and “user satisfaction is monitored on a regular basis and is systematically followed up.” Customisation is in the CoP catered for under the criteria of accessibility and clarity, where a specification is that “custom-designed analyses are provided when feasible and the public is informed.”

Notably in the statistical law relevance is *definiendum* (the term that is defined) and meeting needs *definiens* (the definition of the term). The *definiendum* encompasses even the customisation of statistical products in order to enhance their fitness. It makes the other criteria superfluous, as they are all covered by the cri-

terion of relevance. In the CoP the term that is defined (definiendum) is meeting needs, and the definition of the term (definiens) relevance and utility. Statistics are meeting needs when they are relevant and useful. Relevance is but one of nine criteria official statistics must fulfil. It is a rather weak criterion, as the alternative is statistics that are irrelevant for the user.

The outcome of standardisation is comparability. Conformance to specifications thus determines whether the statistics are fit for the purpose of comparisons. Conversely customisation is fit for the purpose of achieving incomparability.

Comparability distributes power when those who compare are able to act upon the comparisons in ways that affect those who are compared. In markets comparability adds power to the buyers and subtracts power from the sellers. In democratic politics comparability adds power to the voters and subtracts power from the political parties. In national governance comparability adds power to the appropriating authorities and subtracts power from the public services. In supranational governance comparability adds power to the supranational authorities and subtracts power from the member states. “The demand for internationally comparable statistics continues to increase, as do the pressures and opportunities for collaboration” [13], no doubt because globalisation of business increases the number of actors who benefit from being able to compare – and the number of actors who win and lose on becoming subject to their comparisons, the losers rarely in position to demand less comparability. “The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels” [17]. No wonder cross-national comparability is a fundamental principle of official statistics for the EU and the UN.

In all these games the official statistics industry sides with those who want to compare against those who want to avoid being compared. The industry promotes power. If it sided with those who want to avoid being compared it would promote their autonomy. The industry itself gains the power that can be achieved by standardisation and loses the market that can be achieved by customisation. The power the industry gains from standardisation is vendor lock-in. It implies that customers who rely on the comparability of statistics for their power and prosperity must either pay the vendor’s asking price or pay the price of lost comparability.

Conversely incomparability adds power to those who thereby avoid being compared, and subtracts

power from those who thereby are prevented from making comparisons. Typically those who are subject to comparisons want to decide for themselves with whom or what they accept to be compared, as control of the comparison increases their power. Incomparability protects the seller against the buyer, the producer against the consumer, the industry against the customer, the workers against the management, the parties against the voters, the public services against the appropriating authorities, the member states against the supranational authorities, national industries against international ones. It protects the losers against the winners, as those positions presuppose that comparisons are made. Incomparability thus protects the weak against the strong (losers against winners), but also the strong against the weak (industries against customers). Comparability does not protect anyone, but serves the opposite purpose of exposing those who are compared to those who compare them. Comparability may however empower the weak as well as those who are already strong.

Providers seek to achieve incomparability by marketing their offers as brands. When the brand is perceived by the consumers to have unique qualities, superior to those of other offers, it is neither possible nor necessary for them to base procurement on comparisons, impossible because the qualities of the brand are perceived to be unique, unnecessary because the alternatives are imperfect substitutes. The provider has successfully converted perfect competition into monopolistic competition. The consumers relinquish their customer power and accept that procurement takes place on provider terms.

In this respect the official statistics industry behaves like other industries. So do its political and administrative superiors. Thus the “content” definition of official statistics implies that in Sweden and the UK “Official Statistics” and in the UK also “National Statistics” are marketed as brands. Counting the industry’s assets the HLG-MOS notes with approval that an “important asset is our official status, backed by legislation. This distinguishes us from most other statistics producers” [1].

The HLG-MOS fears that the value of the official statistics brand is declining. That fear is not shared by the ESS, or it intends to make a counterattack. Thus it states in its Vision 2010 that

“We will explicitly introduce the brand of European Statistics that guarantees a reliable basis for evidence-based decision-making and an unbiased picture of society. Promoting a clear and meaningful brand to both key users and the broader public

will help to strengthen trust in official statistics. All our users will recognise that our brand represents an independent and internationally comparable information system of high quality” [3].

The ESS could have chosen the opposite approach. It could have introduced European Statistics as label for statistics of high quality and asked an independent body to set the standard, evaluate the products and certify those that satisfy it. The International Organisation for Standardisation with its ISO Standards and the British Standards Institution with its BSI Kitemark could be asked to compete for delivery of such a service. The approach, which would serve the consumers well, would not reserve the label for the ESS, but open for the possibility that ESS statistics failed to satisfy the standard and that statistics produced by its competitors, typically the members of ESOMAR (the world association for market, social and opinion research), managed to satisfy it. But the ESS is not interested in that approach. Instead it prefers the “commercial” approach of brand management, to expand the market and build loyalty among the customers who become convinced that the label European Statistics, provided by the ESS, stands for incomparably much higher quality than statistics from other manufacturers.

By standardising its products the official statistics industry aims at providing its customers with the conditions for perfect competition. By branding its products the industry aims at exposing its customers to the conditions for monopolistic competition. The industry’s strategy is to make its offer of comparative statistics incomparable. Thereby its comparative statistics customers are securely locked in. The industry itself will not be subject to comparisons. That the industry ensures by the use of brands, which makes comparing its offer with those of other statistics suppliers impossible and unnecessary. Whilst many other brands must rely much on the persuasive power of marketing, the brands of the official statistics industry will have some truly unique and superior features (“unique selling points” in the terminology of brand management). The HLG-MOS referred to what makes them truly unique: unlike other comparisons they will have official status, backed by legislation. Legislation also helps making them truly superior: unlike other comparative statistics they can be based on compulsory provision of information and are thus be protected against the threat of the declining response rate.

Therein lies also the brand’s weakness. Its authority is not derived from its own merits, but from the fact that it is backed by legislation. Those who do not vol-

untarily submit to its authority are compelled to do so by the legislators. The brand is therefore also a burden. It prevents the official statistics providers from proving their worth in competition with other providers on equal terms.

4. Creative destruction

The HLG-MOS is in no doubt that official statistics obtain value by standardisation. It envisages two roads to modernity, “the road to new statistical products” and “the road to standards-based modernisation.” Customisation is explicitly written off. The argument against it is however not that it causes incomparability, but that it costs too much. “Statistical organisations are starting to acknowledge that it is becoming too expensive for each and every one of them to individually change their tailored production systems to meet user expectations.” Conversely, standardisation is not promoted for the sake of comparability, but as necessary for international collaboration to reduce the costs. “It is all about reducing the cost of the production process.” Rather than comparability the HLG-MOS is concerned with the quality criterion of coherence, which according to the statistical law refers to “the adequacy of the data to be reliably combined in different ways and for various uses.”

Standardisation is said to improve both efficiency and effectiveness. In order to improve cost effectiveness, or efficiency, all phases of the production process must be standardised: “product design”, by making use of “common, reusable tools and processes”, “process design”, manual and automated, “should be designed by configuring components that are modular in nature and exchangeable between organisations”, “production”, “should be executed by machines, with as little human intervention as possible, and with short turnaround times to minimise operational costs”, and “analysis: statistical subject-matter specialists should use outputs and intermediate results to publish papers and do research with advanced tools and as little human intervention as possible.”

The vision of the HLG-MOS suggests that in the future the main commodity produced by the official statistics industry will not be statistics but semi-finished goods for the production of statistics. The semi-finished goods will be raw data that are standardised and thus interchangeable *cp.* the quality criterion of coherence. Thereto the industry will standardise the tools for their elaboration into statistical goods and services, and treat the tools and the standards as products.

The semi-finished goods can be combined in an infinite number of ways. Their standardisation ensures that the finished products – statistics – will conform to specifications and be fit for the purposes of the users. They can be customised to enhance their utility and will yet retain their comparability.

The vision of the HLG-MOS is based on the terms that “in information society there is an abundance of data” and a “need for more and quicker statistics.” The industry’s competitors are considered better at satisfying that need, and the industry must catch up with them. Much of the “data deluge” caused by information society is unexploited. A “key factor” in the strategy to implement the vision is thus to research the possibilities of unexploited data and develop the promising ones [36].

Semi-finished goods will be sufficient to satisfy advanced users, and what is advanced today will be common tomorrow. “New types of users are emerging, some with powerful computers at their disposal.” Advanced users will use the semi-finished goods to produce their own statistics. In this way the strategy of the HLG-MOS leaves for the customers to set up their own value shops [19] for production of the knowledge intensive products that solve their problems [37].

But the industry is not content with merely producing semi-finished goods. It will also continue to refine them into finished products. The other road to modernity is “the road to new statistical products”; the other part of the strategy is “rejuvenating the product set.”

In order to rejuvenate the industry will explore the needs of “both existing and potential users” and “research the possibilities to meet them.” The HLG-MOS states however that innovations are rarely made to meet existing demands. It is aware that statistical progress is driven by the supply, not the demand. The need for new statistical products must be created, and the official statistics industry must create it. It is also aware that “we cannot force our organisations to create successful innovative products.” What can be done, however, is to “create an environment and conditions in which the innovators will thrive and task them with research in the right direction.”

That may turn out to be easier said than done. Harvey and Broyles identified twenty factors causing resistance to change [38]. Crucial for the official statistics industry may be that it is part of the state’s bureaucracy and the NSIs are organised as bureaucratic institutions. In *Capitalism, Socialism and Democracy* Joseph Schumpeter made a comment on that too.

“The bureaucratic method of transacting business and the moral atmosphere it spreads doubtless often exert a depressing influence on the most active minds. Mainly, this is due to the difficulty, inherent in the bureaucratic machine, of reconciling individual initiative with the mechanics of its working. Often the machine gives little scope for initiative and much scope for vicious attempts at smothering it” [27].

Schumpeter even coined a term for the processes that “incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one”. He called them processes of creative destruction.

Perhaps the greatest challenge to the official statistics industry is not the digital data deluge, nor budget constraints or the coming of competition. Perhaps the industry’s greatest challenge is resistance from within and from above to the creative destruction that if successful will emancipate the NSIs from their bureaucratic confinement and incorporate them in the creative industries.

Acknowledgment

I wish to thank an anonymous reviewer of the original manuscript for inspiring comments.

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