

# Adam Smith on Markets, Competition and Violations of Natural Liberty\*

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## ABSTRACT

According to Adam Smith markets and trade are, in principle, good things – provided there is competition and a regulatory framework prevents ruthless selfishness, greed and rapacity to lead to socially harmful outcomes. But competition and market regulations are always in danger of being undermined and circumnavigated, giving way to monopolies which are very comfortable and highly profitable to monopolists and may spell great trouble for many people. In Smith's view Political Economy – as an important and perhaps even the most important part of a kind of master political science, encompassing the *science of the legislator* – has the task to fight superstition and false beliefs in matters of economic policy, to debunk opinions that present individual interests as promoting the general good, and to propose changing regulatory frameworks for markets and institutions that help to ward off threats to the security of the society as a whole and provide incentives such that self-seeking behaviour has also socially beneficial effects.

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The paper shows that the ideas of Adam Smith still may resonate and illuminate problems of today and theories, which try to tackle them.

Keywords: Adam Smith, Competition, Markets, Monopoly, Natural Liberty, Regulation

## 1. Introduction

Adam Smith advocated a socio-economic system in which large parts of economic life are coordinated via interdependent markets in conditions of free competition. Such a system, he was convinced, favoured “equality, liberty and justice” (WN IV.ix.3) in society and therefore was a good thing. He did *not* argue, as is often contended, “that nothing but selfishness is necessary to yield socially beneficial outcomes” (Schotter 1985: 2). The dark sides of ruthless selfishness, greed and rapacity he encountered on a large scale in the time in which he lived, and he saw that a main effort of selfish people was directed at narrowing and eventually abolishing competition. He deplored time and again “the wretched spirit of monopoly” (WN IV.ii.21) that permeated what he called the “mercantile system” with its privileges, preferences and concentration of economic and political power in a few hands. This system was beneficial to those few at the cost of the many and decelerated economic development and growth. The East India Companies of Britain and the Netherlands were scaring cases in point of the enormous damage unfettered selfish behaviour could bring about. Clearly, selfishness alone did *not* yield socially beneficial outcomes. Checks and balances were needed in order to channel selfish behaviour in directions that were socially beneficial and prevent it from developing its dark and destructive sides. These checks and balances included several elements, from the rule of law to moral norms, particularly self-restraint, and conceived of liberty essentially as the security of the individual. In order for self-regard to be able to properly work to the general benefit, the Scottish moral and political philosopher put forward a substantial list of things that played a role in this. He insisted, among other things, that the constitution of a country, its law and institutions, made a good deal of the difference, and exemplified this with respect to North America on the one hand and the East Indies on the other:

The difference between the genius of the British constitution which protects and governs North America, and that of the mercantile company which oppresses and

domineers in the East Indies, cannot perhaps be better illustrated than by the different state of those countries. (WN I.viii.26)

In *The Fable of the Bees* (1723) Bernard Mandeville had argued that vice, not virtue, engenders prosperity and is thus socially beneficial. He poetised: “The Worst of all the multitude Did something for the common good”; and: “T’ enjoy the World’s Conveniences, Befamed in War, yet live in Ease Without great Vices is a vain Eutopia seated in the Brain” (Mandeville [1723] 1924: 68 and 76). Smith (and before him David Hume) strongly disagreed with Mandeville and in the *Theory of Moral Sentiments* called the latter’s views “in almost every respect erroneous” (TMS: 451). Containing vicious behaviour need not, as Mandeville had contended, entail a cumulative downturn of the economy, because of dwindling levels of demand with the result that locksmiths would no longer produce locks, lawyers and judges would go out of business, standing armies become superfluous etc. Since according to Smith “the desire of bettering our condition ... comes with us from the womb, and never leaves us till we go into the grave” (WN II.iii.28), there is no fear that the productive resources that are no longer needed to protect a man’s property will not eventually be used in other activities:

The uniform, constant, and uninterrupted effort of every man to better his condition, the principles from which publick and national, as well as private opulence is originally derived, is frequently powerful enough to maintain the natural progress of things toward improvement ... (WN II.iii.31)

Hence good government, which controls and retrenches the dark sides of selfishness, will not lead to poverty and misery. On the contrary, it will stimulate diligence, industry and creativity. The “science of the legislator”, Smith had elaborated, was designed to show the way to good government.

What was missing was a demonstration of the working of markets in conditions of free competition. Pursuing one’s self interest in a decentralised economy through a network of interdependent markets did not imply chaos and anarchy, as several economists and social philosophers had argued. It did not imply a *bellum omnium contra omnes*, unless Leviathan, the absolutist state, would intervene with an iron fist and keep the desires and avidities of individuals at bay, as Thomas Hobbes had argued. No Leviathan was required, and if there was one it was detrimental to the well being of the large majority of the people. But good government was badly needed. It had to provide an institutional and regulatory framework that involved incentives, which channelled selfishness in directions that were not only

individually, but socially beneficial. And it had to establish and preserve competitive conditions.

The paper is composed in the following way. Section 2 deals with Smith's view as to the origin of man's propensity "to truck, barter, and exchange", that is to say, to organise markets and carry out most of his economic transactions by means of this medium. Section 3 turns to Adam Smith's distinction between "market" and "natural" prices and expounds the determination of the latter within a simple analytical framework. Smith considers natural prices as the more fundamental magnitudes and conceives of them as centres of gravitation of market prices. Section 4 therefore turns to his idea of the gravitation of market prices towards, or oscillation around, their natural levels and what in Smith's view spoke in its favour. Clearly, if there was no such gravitation (or oscillation) the concept of natural price could be said to be void and Smith's view of markets and their allegedly remarkable properties without any foundation. A simple model will be used to discuss Smith's view, the difficulties it faces and how they can be overcome. Section 5 deals briefly with the centripetal forces unleashed by competition: the introduction of "improvements" and innovations – new methods of production and new goods – and how they are absorbed into the economic system. Section 6 addresses the problem of the information upon which sellers and buyers in markets base their decisions and act. It will be argued that Smith was perfectly well aware of the fact that information is asymmetrically distributed amongst market participants, a fact that gives rise to the phenomena of moral hazard and adverse selection. This will be illustrated in terms of the banking trade, which Smith identified as being particularly prone to malfunctioning and instability. The danger that selfish and unscrupulous people might endanger the security of the whole society makes him advocate regulations of the banking trade, notwithstanding the fact that this involves a violation of natural liberty. Section 7 contains some observations on the "wretched spirit of monopoly", which is permanently on the lookout for means and ways to abandon competition in the interest of abnormal profits. Section 8 concludes.

Before I turn to the main argument of this paper, it should be mentioned that our understanding of the classical economists has been substantially revised and improved thanks to Piero Sraffa's reformulation of the "standpoint ... of the old classical economists from Adam Smith to Ricardo", a standpoint which had been "submerged and forgotten since the advent of the 'marginal' method." (Sraffa 1960: v) This standpoint has then been further elaborated by, among others, Pierangelo Garegnani, Luigi Pasinetti, Bertram Schefold and Ian Steedman. It has brought back to life the extraordinary richness, depth and basic coherence of

the classical economists' analysis, which differs in important respects from the marginalist one. The following disquisition shows that many of the insights Smith had into the structure of the economic system and its working have been lost sight of in much of modern theory. The paper thus also throws into doubt the widespread view that the market for economic ideas is a perfectly functioning selection mechanism that preserves everything that is sound and valid and eliminates everything that is misleading and wrong. For example, had Smith's analysis of the banking and financial system been absorbed into the mainstream, the recent financial crisis would not have been met with surprise and disbelief in large parts of the economics profession.

## **2. Men's natural faculties, the propensity to exchange, and markets**

The starting point of Smith's analysis of markets is a philosophical anthropology of man's nature and disposition, his innate characteristic features, his urges and desires, his physical, mental and emotional faculties etc. In the *Theory of Moral Sentiments* Smith had displayed his view of man in great detail. In the *Wealth of Nations* he focused on those characteristics of man that are of special importance in economic life. A benign "Providence", he was convinced, had endowed man with faculties and motives that conditioned him toward association, cooperation and competition, development and growth. Smith discerned "a certain propensity in human nature ... to truck, barter, and exchange one thing for another" (WN I.ii.1). He added:

Whether this propensity be one of those original principles in human nature, of which no further account can be given; or whether, as seems more probable, it be the necessary consequence of the faculties of reason and speech, it belongs not to our present subject to enquire. It is common to all men, and to be found in no other race of animals, which seem to know neither this nor any other species of contract. (WN I.ii.2)

But man is not only able to communicate, truck, barter and exchange, he is also in need of it: "In civilized society he stands at all times in need of the cooperation and assistance of great multitudes, while his whole life is scarce sufficient to gain the friendship of a few persons." From this Smith concludes that

man has almost constant occasion for the help of his brethren, and it is in vain for him to expect it from their benevolence only. He will be more likely to prevail if he can interest

their self-love in his favour, and shew them that it is for their own advantage to do for him what he requires of them. Whoever offers to another a bargain of any kind, proposes to do this. Give me that which I want, and you shall have this which you want, is the meaning of every such offer; and it is in this manner that we obtain from one another the far greater part of those good offices which we stand in need of. (WN I.ii.2)

He exemplifies what we nowadays call the *double coincidence of wants* in one of the best known passages of *The Wealth*:

It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages. (WN I.ii.2)

Finally he also sees the division of labour – which in his construction is the source of opulence – rooted in the propensity under consideration:

As it is by treaty, by barter, and by purchase, that we obtain from one another the greater part of those mutual good offices which we stand in need of, so it is this same trucking disposition which originally gives occasion to the division of labour. (WN I.ii.3)

Within a few pages Smith establishes two crucial axioms upon which his entire analysis rests:

- (i) The market is a natural form of organising economic affairs, because it reflects natural faculties of man.
- (ii) Man's well-being depends on the proper exertion of his trucking disposition and thus on the functioning of markets, because they lead to an ever deeper division of labour, increase labour productivity and raise income per capita, Smith's measure of the wealth of a nation.

According to Smith, markets perform their role best in conditions of *free competition*, that is, in the absence of barriers to entry in and exit from the various markets. Competition activates both what may be called centripetal and centrifugal forces. The former are supposed to make market prices gravitate towards (or oscillate around) their natural levels and thus actually establish what is nowadays called a long-period position of the economic system with respect to commodity prices and income distribution, which is ascertained independently of the

process of gravitation. The latter involve a disruption of that position and its replacement by a new one as a consequence of technical and organisational change. While in the former case the battle of competition is fought with respect to prices, given technical knowledge, in the latter case it is fought with respect to new technical knowledge – new methods of production and new goods, that is, “improvements” or innovations. In the second case competition may be compared to a whip propelling the economic system to higher and higher levels of productivity and a growing variety of goods. It refers to the non-equilibrium, evolutionary and development side of competition. In both cases the emphasis is on the rivalry between agents and the behavioural process it engenders.<sup>1</sup>

Here we focus first on the centripetal forces of competition. They give order and coherence to the economy by disciplining the market participants: “good management”, Smith insists, “can never be universally established but in consequence of that free and universal competition, *which forces every body to have recourse to it for the sake of self-defence*” (WN I.xi.b.5; emphasis added).<sup>2</sup> Good management is considered the *sine qua non* of survival in competitive markets. For example, firms underbid one another as regards the price of the product in order to increase their sales, and they overbid one another as regards the wages paid to workers in order to attract more workers when the economy is in an “advancing condition” (WN I.vii.1) and employment is high. Competition and markets, Smith was convinced, accomplish effectively and at a small cost what a Leviathan could accomplish, if at all, only much less effectively and at a much higher cost.<sup>3</sup>

Free competition forms the basis of what Smith called “a system of natural liberty”, because it is seen to realise as best as possible the principles of “equality, liberty and justice”. (Equality

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<sup>1</sup> Smith was not the first author to advocate such a concept of competition. He was anticipated by Richard Cantillon and Anne Robert Jacques Turgot (see Kurz and Salvadori 1995: 37-40). Smith has rightly been called “the great systematizer” in this area of analysis (as well as in others), who blended the insights of earlier authors and insights of his own in as coherent a whole as possible (McNulty 1968: 646-5).

<sup>2</sup> Marx, echoing Smith’s remark, was later to speak of the “coercive law of competition”.

<sup>3</sup> John Stuart Mill ([1848] 1973, vol. II: 242) maintained that “Only through the principle of competition has political economy any pretension to the character of a science”, because rents, profits, wages and prices are determined by competition, so that “laws may be assigned for them.” It deserves to be stressed that the classical concept of free competition must not be confounded with the marginalist concept of perfect competition, as is frequently done in the literature. For a clear discussion of the differences between the two concepts, see McNulty (1968) and recently Salvadori and Signorino (2013: section 1).

here means equal opportunity and rights of agents, not material equality.) Free competition involves the absence of any legal or other barriers to entry in or exit from a market: where there is “perfect liberty”, Smith writes, a producer or proprietor of capital, land or capacity to work “may change his trade as often as he wishes” (WN I.vii.6). However, barriers to mobility play an important role in the mercantile system with its “particular regulations of police” (WN I.vii.20), such as legal monopolies, privileges, preferences, guilds, statutes of apprenticeship etc. Smith was highly critical of such barriers and opted for their abolition, but he allowed for several exceptions to natural liberty. An obvious case is when the integrity of the State itself is threatened. He thus defended the Act of Navigation, which gave the sailors and shipping of Great Britain the monopoly of the trade of their own country, on the ground that “defence is of much more importance than opulence” (WN IV.ii.30). But in Smith we find also several examples of purely economic justifications for legal interventions and regulations. See in this regard the detailed list in Aspromourgos (2009; see also 2013) and the important instances discussed in Section 6 below.

Smith’s remarkable advocacy of the monopoly privileges of the Bank of England is to be seen in connection with his dictum regarding defence versus opulence. The Bank of England, he was convinced, played an important role in financing public expenditures, by advancing taxes to be paid to the Crown at an interest in times of peace and by contracting public debt in times of war (see WN V.iii.4). The Bank of England was “the backbone of the country’s fiscal strength, and thus of its international power”.<sup>4</sup> See on this Goodacre (2010).

Setting aside these exceptions let us turn to the case of free and unbridled competition, Smith’s ideal state of affairs. This state of affairs, Smith was clear, did not mimic the reality of the time in which he lived – the distortions caused by the mercantilist policy were still visible in almost each and every part of the economy. It was the state Smith advocated as the first best solution if assessed in terms of economic performance – the size of the social product in a given year, its growth over time and its distribution among the different ranks of people. When he nevertheless carried out much of his abstract analysis of the working of markets on the premise of free competition, he did so because he wished to demonstrate the superior properties of the system of natural liberty and its self-regulating, homeostatic nature.

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<sup>4</sup> I borrowed this expression from the report of one of the referees. As is well known, Ricardo did not share Smith’s view and was highly critical of the Bank of England’s privileges.



So how do markets function in Smith's view? What kind of results do they generate? And, perhaps most important: Are they *stable*? Can one entrust the destiny of large parts of social life to their care? This brings us to an investigation of Smith's view of the formation of prices and the determination of income distribution as it is contained in Chapter VII of Book I of *The Wealth of Nations*.

### 3. Market prices and natural prices

Smith distinguishes between "market prices" and "natural prices". About the former he writes:

The market price of every particular commodity is regulated by the proportion between the quantity which is actually brought to market, and the demand of those who are willing to pay the natural prices of the commodity, or the whole value of the rent, labour, and profit, which must be paid in order to bring it thither. Such people may be called the effectual demanders, and their demand the *effectual demand*; since it may be sufficient to effectuate the bringing of the commodity to market. (WN I.vii.8; emphasis added)

The distinction between market and natural prices corresponds to that between all kinds of forces affecting prices in a given place and time, including forces that are temporary, accidental and non-systematic, on the one hand, and forces that are persistent and systematic, on the other. Natural prices reflect only persistent and systematic forces. These include

- (i) The system of production actually adopted by cost-minimising producers and
- (ii) Real wages paid to workers.

Real wages depend in turn inter alia on whether the economy is in a declining, stagnant or growing state (see, for example, WN I.vii.33). Given independent variables or data (i) and (ii) the dependent variables (a) the rate of profits and the rents of land and (b) natural prices can be ascertained (see below). "The competition of the different dealers", Smith writes, "obliges them all to accept of this [natural] price, but does not oblige them to accept of less" (WN I.vii.11). He insists that the natural price is the lowest price in the long run, "which sellers can commonly afford to take, and at the same time continue their business": it covers their costs of production and yields them the ordinary rate of return on capital.

**Natural prices** Setting aside the problem of land and the rent of land (a very weak part in Smith's analysis, as Ricardo was to point out; see also Kurz and Storn 2013a and b), the

system of *natural price* equations is characterised by a uniform (net) rate of profits  $r$  on the capital advanced in each sector of the economy.<sup>5</sup> For the sake of achieving greater analytical clarity we may formalize Smith's argument. In the simple case of  $m$  single-product industries and thus circulating capital only, and normalising gross outputs as unity, we can write the natural price equations of classical derivation as

$$\mathbf{p} = (1 + r)\mathbf{A}\mathbf{p}, \quad (1)$$

where  $\mathbf{p}$  is the  $m$ -dimensional price vector  $(p_1, p_2, \dots, p_m)^T$ ,  $r$  is the general rate of profits and  $\mathbf{A}$  is the matrix of material inputs per unit of output, where the vector of inputs needed by an industry to produce its gross output of one unit is given by the respective row of the matrix (see Kurz and Salvadori 1995: chapter 4). Each coefficient of  $m \times m$  matrix  $\mathbf{A}$  gives the amount of a particular commodity used up as a means of production in the production of a particular commodity plus the amount of that commodity needed in the support of the workers producing it. We may split up matrix  $\mathbf{A}$  into a matrix giving only the material means of production,  $\mathbf{M}$ , and a matrix giving the necessary subsistence of workers,  $\mathbf{S}$ . On the simplifying assumption of a uniform real wage per unit of labour employed in production, given by vector  $\mathbf{w}^T = (w_1, w_2, \dots, w_m)$ , and denoting the quantities of (direct) labour needed per unit of output in the different industries by  $\mathbf{l} = (l_1, l_2, \dots, l_m)^T$ , we have

$$\mathbf{A} = \mathbf{M} + \mathbf{S} = \mathbf{M} + \mathbf{l}\mathbf{w}^T$$

and therefore

$$\mathbf{p} = (1 + r)(\mathbf{M} + \mathbf{l}\mathbf{w}^T)\mathbf{p}. \quad (2)$$

With  $\mathbf{M}$ ,  $\mathbf{l}$  and  $\mathbf{w}$  given, and taking the bundle of non negative quantities of the different commodities  $\mathbf{b}^T = (b_1, b_2, \dots, b_m)$  as the standard of value or numeraire, that is setting its value equal to unity,

$$\mathbf{b}^T\mathbf{p} = 1, \quad (3)$$

the general rate of profits  $r$  and the natural prices in terms of the standard  $\mathbf{b}$  can be ascertained. No other data or known variables are needed to determine the unknowns.

This is a formalisation of the concept of natural prices put forward verbally by Smith in WN I.vii.<sup>6</sup> Here the real wage  $\mathbf{w}$  and the rate of profits  $r$  designate what Smith called the “natural

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<sup>5</sup> Here we set aside Smith's discussion in WN I.x of systematic and permanent differences in profit rates due to differential risk, agreeableness of the business etc. See, therefore, Kurz and Salvadori (1995: chap. 11).

<sup>6</sup> There is some controversy about whether Smith saw the constraint binding changes in real wages and the general rate of profits, given the system of production in use. As we argue in Kurz and Storn (2013a: 90-112), Smith glimpsed the constraint in some

rate of wages” and the “natural rate of profits”. At natural prices  $\mathbf{p}$  the real wage  $\mathbf{w}$  translates into a nominal wage  $w$  in terms of the standard of value

$$w = \mathbf{w}^T \mathbf{p}. \quad (4)$$

**Market prices** For a given real wage, Smith considers natural prices  $\mathbf{p}$  and rate of profits  $r$  as *centres of gravitation* of market or actual prices:

The natural price, therefore, is, as it were, the central price, to which the prices of all commodities are continually gravitating. Different accidents may sometimes keep them suspended a good deal above it, and sometimes force them down even somewhat below it. But whatever may be the obstacles which hinder them from settling in this center of repose and continuance, they are constantly tending towards it. (WN I.vii.15)

Market prices are also said to “oscillate” around their natural levels.<sup>7</sup>

Why do market prices happen to deviate from their natural levels? Because there is no presumption that the quantity of a commodity that is actually brought to market equals the effectual demand for it, that is, that quantity which will find a sufficient, and just sufficient, demand if the natural price of the commodity prevails. Smith conceives both of the quantity brought to market and effectual demand as given quantities and not as schedules or functions relating price and quantity as in marginalist theory with its concepts of the forces of “demand” and “supply” (see Garegnani 1983). The deviation of market prices from their natural levels reflects the fact that many economic transactions in market economies are typically not settled ahead of time (in terms of existing future markets) or coordinated *ex ante* by some central

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passages of *The Wealth*, but then lost sight of it again in others. One of the reasons for this is to be seen in the fact that he tended to associate higher real wages with a higher labour productivity (see, e.g., WN I.viii.44). Hence he did not take the system of production to be independent of real wages. In this case the impact of an increase in wages on the rate of profits is not obvious. It was Ricardo who for good established the inverse relationship between real wages and the rate of profits, given the system of production.

<sup>7</sup> It should come as no surprise that in the context of the problem of gravitation (see Section 4 below) Smith employs terms used by Sir Isaac Newton in astronomy, indicating a certain analogy seen by Smith between the types of phenomena under consideration. What Smith appears to have in mind with respect to  $(\mathbf{p}, r)$ , paraphrased in terms of modern economic dynamics, is a stable fixed point that is not necessarily asymptotically stable; if it is not, it is a limit cycle. See, for example, Shone (2002).

authority. The question then is by means of which mechanism is coordination achieved over time? What Smith has to show is that such deviations are self-correcting: whenever they emerge they swiftly activate forces from within the economic system that tend to remove them and bring the system back to its natural or normal or long-period position. Since this self-correcting process is supposed to work quickly and efficiently, Smith concludes that it is admissible to focus attention on natural prices and their determinants and consider market prices only incidentally, when short-run considerations are appropriate. This applies, for example, to the case of a public mourning, which “raises the price of black cloth (with which the market is almost always understocked upon such occasions) and augments the profits of the merchants who possess any considerable quantity of it.” At the same time “It sinks the price of coloured silks and cloths, and thereby reduces the profits of the merchants who have any considerable quantity of them upon hand” (WN I.vii.19). In other cases substantial and time-consuming processes of the reallocation of capital, labour and land will take place. Self-interested behaviour, Smith is convinced, will bring about these processes and thereby effectuate the gravitation of market prices and of distributive variables (profits, wages and rent) towards their natural levels.

While Smith talks most of the time about *the* market price of a commodity (as opposed to its natural price), as if it was a single price, he is well aware of the fact that different circumstances of firms and customers will typically be reflected in a multiplicity of actual prices, that is, a dispersion of market prices. In the following we set aside this aspect of market imbalances.

The view of Smith and the subsequent Classical economists that the process of gravitation works rather smoothly is based on two premises:

1. Whenever the quantity of a commodity brought to market is smaller (larger) than effectual demand, the market price will be above (below) the level of the natural price of the commodity. This implies that the sectoral (commodity-specific) rate of profit (and/or the wage rate and or the rents paid) will be above (below) their natural level.
2. Profit-seeking producers will decrease (increase) the quantity of the commodity brought to market, if the sectoral (commodity-specific) rate of profit is below (above) the level in other (adjacent) sectors of the economy.

Are these premises necessary and sufficient to support Smith’s conviction that the vector of natural prices is, in modern terms, a stable fixed point (an attractor)? This question received

considerable attention in the aftermath of the publication of Piero Sraffa's *Production of Commodities by Means of Commodities* (1960), which was explicitly designed to reformulate and revive "the standpoint of the old classical economists from Adam Smith to Ricardo" (Sraffa 1960: v). However, apart from providing some allusions and hints Sraffa in his book did not deal with the gravitation problem; he rather assumed that gravitation works. Could an analysis of it be elaborated that supplements Sraffa's reformulation and rectification of the classical theory of value and distribution and thereby base Smith and the classical economists' view on more solid ground?

#### 4. The problem of gravitation

A rich literature on gravitation blossomed in the 1980s and 1990s, but the results were not conclusive. Depending on the kind of formalisation chosen, prices gravitated or they didn't. Here is not the place to provide a detailed summary account of this literature (see Bellino 2011). It suffices to point out why some of the results were negative, doubting or denying gravitation, whereas others were positive, basically confirming Smith's intuition – an intuition shared by a large number of economists, including Ricardo, John Stuart Mill, Marx and basically also all marginalist authors working within a long-period framework of the analysis, such as Eugen von Böhm-Bawerk, Knut Wicksell, Léon Walras, Vilfredo Pareto und Gustav Cassel.

The majority of models were of the "cross-dual dynamics" variety. In these models it was assumed that relative prices react upon sectoral output proportions and vice versa.<sup>8</sup> More precisely, the rates of change of actual prices respond to deviations of effectual demand from the quantity brought to the market, and the rates of change of sectoral output proportions respond to deviations of sectoral from the average (or natural) rate of profits.

The formalisation of gravitation typically starts from a given fixed point  $(\mathbf{x}^*, \mathbf{p}^*, r^*)$ , characterised by a uniform rate of profits

$$r_1 = r_2 = \dots = r_m = r^*,$$

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<sup>8</sup> Cross-dual gravitation models were introduced into the literature by Nikaido (1983) in the context of a discussion of Marx's view of competition. For a short summary account of the basic approach and problems, see Boggio (1986); for a more comprehensive account, see Bellino (2011).

and the equality between effectual demand and actual supply in each and every market

$$\mathbf{d}^* = \mathbf{s} = \mathbf{x}^*,$$

where  $\mathbf{d}^* = (d_1^*, d_2^*, \dots, d_m^*)$  gives the vector of effectual demands,  $\mathbf{s} = (s_1, s_2, \dots, s_m)$  gives the vector of actual supplies and  $\mathbf{x}^*$  indicates the quantities corresponding to  $\mathbf{p}^*$  and  $r^*$ . Then the two premises of Smith's view were modelled in the following way. Premise 1 was taken to imply with regard to commodity  $j$  ( $j = 1, 2, \dots, m$ ) that there exists a continuous and sign-preserving function  $f_j$  that translates differences between  $d_j^*$  and  $s_j$  into an instantaneous change of actual price  $p_j$

$$dp_j/dt = f_j(d_j^* - s_j), \quad (5)$$

where  $dp_j/dt$  gives the time derivative of the market price of commodity  $j$ . Premise 2 concerns a change in output and supply of commodity  $j$  as a consequence of capital (and labour) movements between sectors triggered by a difference between sector  $j$ 's profit rate and the rates yielded in adjacent sectors. This difference was seen to follow from a difference between commodity  $j$ 's market price and its natural price. The mechanism contemplated was translated into a continuous and sign-preserving function

$$ds_j/dt = g_j(p_j - p_j^*), \quad (6)$$

where  $ds_j/dt$  gives the time derivative of the supply of commodity  $j$ . Movements of prices respond to differences of quantities and vice versa: this is the basic logic of the cross-dual models of gravitation.

Alas, it turned out that equations (5) and (6) were not sufficient to establish gravitation in the given context. Hence, in order to overcome the impasse, various authors added to these equations further ad hoc assumptions, including, for example the assumption that the vector of effectual demands does not change over time or the assumption that it changes in a given manner, for instance it grows proportionately at a given rate of growth. In the first case both wages and profits are consumed, whereas in the second case in normal or natural conditions and assuming that there is no saving and investment out of wages, all profits are saved and invested in the sector in which they have been made.

This did not, however, settle the issue. While in a two-sectoral framework there is an equivalence between  $(p_j - p_j^*) > 0$  [ $(p_j - p_j^*) < 0$ ] and  $r_j > r^*$  ( $r_j < r^*$ ), in an  $m$ -sectoral framework ( $m > 2$ ) this is not necessarily the case: While the market price of a commodity may be larger (smaller) than its natural price, the sectoral (commodity-specific) profit rate

need not be larger than that of an adjacent sector or the average rate in the economy as a whole,  $r_\phi$ : it may be the case that the market prices of one or several of the sector's inputs are above their natural levels, with the effect that the rate of profit of the sector under consideration is below the natural and the average rate in the system as a whole (see Steedman 1984). Obviously it is not good enough to look just at the situation in a single sector – a partial analysis will not do. One rather has to look at all sectors and their interdependences and all prices and output levels in order to be able to assess sectoral profit rates.

The problems indicated are illustrated in Figures 1 and 2, where Figure 1 deals with the 2-commodity case and Figure 2 with the  $m$ -commodity case. In the first case (see Fig. 1) F gives the long-period position of the sector producing commodity  $j$ . If the amount of commodity  $j$  ( $j = 1, 2$ ) brought to market  $s_j^0$  is larger than effectual demand  $x_j^*$ , the actual price of commodity  $j$ ,  $p_j^0$ , will be smaller than its natural price,  $p_j^*$ ; correspondingly the actual rate of profit,  $r_j^0$ , will be lower than the natural rate,  $r^*$ , and the rate in the other sector. Now assume that according to the particular specification of the adjustment functions (5) and (6), the actual price quantity constellation happens to move from  $E^0$  to  $E^1$ . Clearly, actual output has to decrease, and so it does. This part of the story appears to be all right. But the other part is not: the momentum of a falling price of the product, implied by the initial constellation, is still overwhelming and leads to a further drop of the price and, correspondingly, an even larger deviation of the sectoral profit rate from the natural one and the one obtained in the other sector. Hence the output of commodity  $j$  would have to fall even further, because  $r_j^1 < r^*$ , and this despite the fact that commodity  $j$  is already in short supply compared with effectual demand.

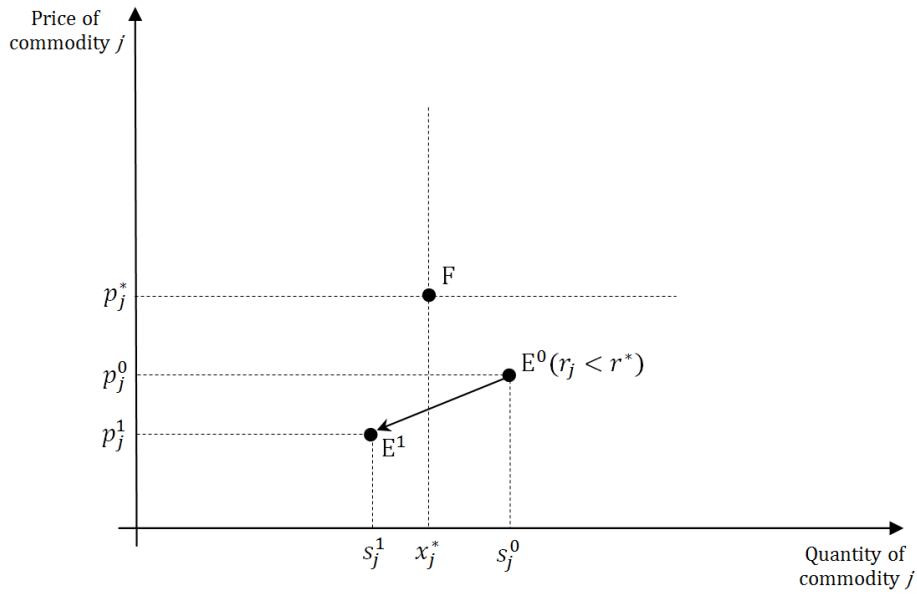


Fig. 1: The two-sector case

In the  $m$ -sectoral case depicted in Fig. 2 a quantity brought to market of commodity  $j$  is supposed to fall short of effectual demand, which is reflected in an actual price of commodity  $j$  that is higher than the natural level of it; see point  $E^0$  in Fig. 2. However, for the reason given in the above this does not necessarily mean that the commodity-specific rate of profit is higher than the natural rate or an average of the rates obtained in the other sectors. If the rate of profit in sector  $j$  happens to be smaller than these other rates, this would involve capital and labour leaving the sector, thereby decreasing output and thus further increasing the deviation from the long-period position. Instead of reducing the deviation from the long-period position, it acerbates it with respect to commodity  $j$ . Comparing  $E^1$  and  $F$ : While the price response seems to be all right, the higher market price is not reflected in a higher (i.e. above-average) commodity-specific rate of profit. Therefore, more capital and labour will be withdrawn from the sector, implying a further decrease in output and correspondingly a further increase in commodity  $j$ 's market price and thus an even greater deviation from the long-period position.



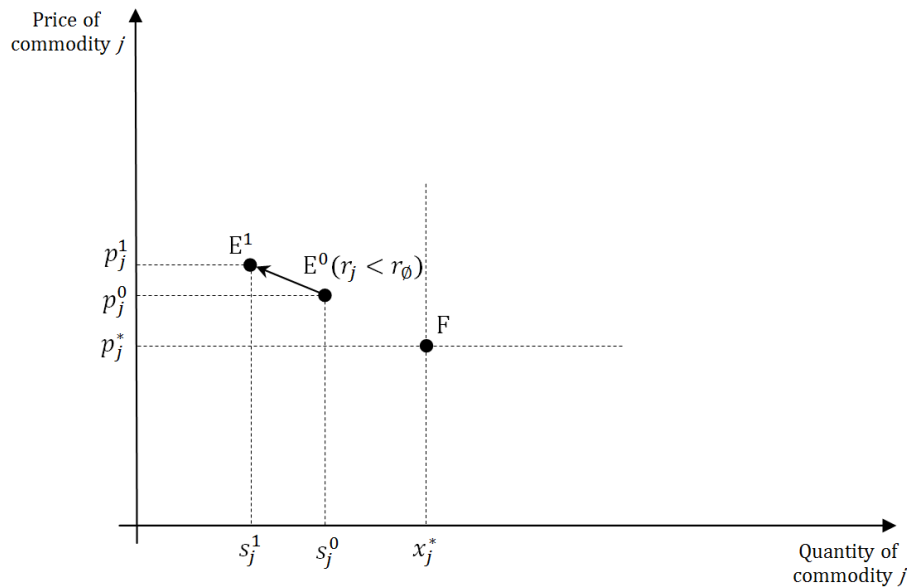


Fig. 2: The m-sector case

Hence the dynamics of the cross-dual models of gravitation imply that the process is inherently unstable. Does this imply that there is no reason to trust in Smith's basic idea and, a fortiori, in the importance of the concept of a long-period position  $(\mathbf{x}^*, \mathbf{p}^*, r^*)$ ? After all, what would be the worth of an economic state – a long-period position – that is not an attractor or centre of gravitation of actual magnitudes?

According to some commentators, the negative conclusions drawn by certain contributors to the debate were premature. First, the negative results obtained are not as negative as they look at first sight. Secondly, the cross-dual models can be said not to formalise the idea of gravitation in a way that is faithful to Smith and other classical economists. If the formalisation is adapted accordingly, stability results obtain in well-specified conditions.

Garegnani (1990) has put forward the following argument in support of gravitation. His point of reference was Sraffa's (1960) multi-sector analysis of the production of commodities by means of commodities. In such a framework, while the situation displayed in Fig. 2 may apply in some sectors, it cannot simultaneously apply in all sectors. In a system in which each commodity enters directly or indirectly into the production of all commodities, when a positive deviation of the market price of a particular commodity is accompanied by a negative deviation of the rate of profit, then the same opposition of signs cannot be true for at least one of the means of production that enters directly or indirectly into that commodity. For that means of production both the rate of profit and the market price deviation will have to be positive. Hence, the rise in its output will tend to reduce its market price, leading directly or

indirectly to an increase in the rate of profit of the commodity. This increase in the rate of profit will then reverse “the initial ‘perverse’ [fall] in output” (Garegnani 1990: 331).

As regards the second point, if one replaces adjustment mechanism (5) by a mechanism in which the levels (rather than the rates of change) of market prices relative to natural prices respond to differences between effectual demand and quantities brought to market, it can be shown that the processes converge to a long-period position (see Bellino and Serrano 2011).

Finally, Salvadori and Signorino (2014a) argue that Smith (but also, for example, Marx), refer to market prices not as a single price holding at a given moment of time, but as a constellation of prices that reduce to a single one only in the special cases of a buyers’ market or a sellers’ market, and that market prices could be studied using probability distributions as students of Bertrand competition have done. With respect to gravitation they argue that the difficulties encountered in the respective literature are probably related to the erroneous concept of market price as a single magnitude. It will still have to be investigated whether the difficulties might perhaps be overcome by starting from dispersed prices, as Smith had suggested.

Related to this a few further observations on Smith’s analysis are apposite. He stressed that reactions of prices in different sectors will typically be different, reflecting differences in the characteristic features of the sectors, the needs and wants of people, their wealth etc. And he stressed that a deficient supply will trigger a competition among buyers (so-called sellers’ market), whereas an excess supply will trigger a competition among sellers (so-called buyers’ market): competition will thus be ignited on what is nowadays dubbed the “long” side of the market. For example, Smith emphasised that consequent upon a deficiency of actual supply compared with effectual demand

A competition will immediately begin among them, and the market price will rise more or less above the natural price, according to as either the greatness of the deficiency, or the wealth and wanton luxury of the competitors, happen to animate more or less the eagerness of the competition. Among competitors of equal wealth and luxury the same deficiency will generally occasion a more or less eager competition, according as the acquisition of the commodity happens to be or more or less importance to them: Hence the exorbitant price of the necessities of life during the blockade of a town or in a famine. (WN I.vii.9)

In the case of the quantity exceeding effectual demand

The market price will sink more or less below the natural price, according as the greatness of the excess increases more or less the competition of the sellers, or according as it happens to be more or less important to them to get immediately rid of the commodity. The same excess of the importation of perishable, will occasion a much greater competition than in that of durable commodities; in the importation of oranges, for example, than in that of old iron. (WN I.vii.10)

Translating Smith's reasoning into a formalisation in which the levels of prices and the levels of output will be affected by deviations of outputs and prices from their natural levels then allows one to discuss Smith's intuition of the stabilising role played by the mobility of capital (and labour).

We may conclude this section by stating that while the stability issue is far from being fully settled, in the light of some recent studies it appears to look less disquieting than it did some time ago. In the following we rely on Smith's idea of the stability of commodity markets in the sense that in competitive conditions actual prices can be taken to converge towards, or oscillate around, their natural levels.

We now turn briefly to what we called the centrifugal force of competition: the rivalry in a race makes producers seek to defend themselves from competitors by introducing new methods of production and new goods. Competition, the story goes, is responsible for what was later called the restlessness of the capitalist economy, continuously generating change from within.<sup>9</sup>

## **5. Improvements**

Here it suffices to draw the attention to the following elements of Smith's analysis.<sup>10</sup> First, Smith saw improvements taking place in all sectors of the economy. The successful innovator is said to make extra profits for a while until as a consequence of imitation and the diffusion of the improvement across the economy the extra profits of the pioneer will erode and a new long-period position emerge. Smith pointed out:

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<sup>9</sup> The sung hero of "new combinations", that is, innovations, and the process of "creative destruction" is, of course, Joseph A. Schumpeter (1912); see Kurz (2012) and Kurz and Storn (2012). The unsung hero, one might add, is Marx.

<sup>10</sup> For a more detailed discussion of Smith's view of technical change, its achievements and shortcomings, see also Aspromourgos (2009), Kurz (2010) and Kurz and Storn (2013a).

The establishment of any new manufacture, of any new branch of commerce, or of any new practice in agriculture, is always a speculation, from which the projector promises himself extraordinary profits. These profits sometimes are very great, and sometimes, more frequently, perhaps, they are quite otherwise; but in general they bear no regular proportion to those of other old trades in the neighbourhood. If the project succeeds, they are commonly at first very high. When the trade or practice becomes thoroughly established and well known, the competition reduces them to the level of other trades. (WN I.x.b.43)

Secondly, while innovations unleash centrifugal forces, which displace the old long-period position of the economy ( $\mathbf{x}^*$ ,  $\mathbf{p}^*$ ,  $w^*$ ,  $r^*$ ) and define a new one ( $\mathbf{x}^{**}$ ,  $\mathbf{p}^{**}$ ,  $w^{**}$ ,  $r^{**}$ ), they at the same time activate the centripetal forces of competition that move the system towards the latter.

Third, a part and parcel of the ever deeper division of labour induced by competition is the emergence of what nowadays is called the Research and Development (*R&D*) sector of the economy. Smith observes:

All the improvements in machinery ... have by no means been the inventions of those who had occasion to use the machines. Many improvements have been made by the ingenuity of the makers of the machines, when to make them became the business of a peculiar trade; and some by that of those who are called philosophers or men of speculation, whose trade it is, not to do any thing, but to observe every thing; and who, upon that account, are often capable of combining together the powers of the most distant and dissimilar objects. *In the progress of society, philosophy or speculation becomes, like every other employment, the principal or sole trade and occupation of a particular class of citizens.* (WN I.i.9; emphasis added)

Philosophy or speculation, that is, science, percolates ever more modern society and becomes the foundation of its material metabolism and surplus creation. 250 years before the invention of the term “knowledge society” Smith insists that “the quantity of science” available to a society decides its members’ productivity and wealth (WN I.i.9).

Fourth, it is interesting to note that Smith uses the combinatory metaphor to describe novelty: new economically useful knowledge derives from the combination of reconfigured bits of known particles of knowledge – a definition, which involves the path dependency of progress in knowledge. Interestingly, Schumpeter (1912) and several other economists after him adopted the metaphor.

Fifth, the unintended consequences of self-seeking behaviour are an important theme in Smith's analysis. By pursuing their profit interests, capitalists are said to trigger a process, which eventually, "behind their backs" as Marx was to say, improve the lot of the many, that is, increase also the incomes of the "labouring poor" (WN I.i.1) and are thus beneficial to society as a whole. This is Smith's main argument in favour of a market economy. The criticism of selfishness, greed and rapacity from a purely moral point of view by the canonists and Schoolmen focuses attention on individual motives, but ignores largely the effects that according to Smith follow from actions based upon such motives. In a *well-governed society* self-interested behaviour is seen to generate largely socially beneficial results. A narrowly moral point of view prevents one from forming a solid judgement on the subject matter.<sup>11</sup>

In the following two sections we take into account additional aspects of the problem at hand. We begin with a discussion of the problems of what nowadays are called asymmetric information, moral hazard and adverse selection in Section 6, with the focus being on banking and financial markets. It is interesting to see that Smith's analysis foreshadows these concepts. Then, in Section 7, we turn briefly to "the wretched spirit of monopoly", which Smith considered to be the greatest danger to a regime of "natural liberty" and which, in his view, dominated the mercantilist system.

## **6. Asymmetric information, moral hazard and adverse selection**

Up until now we have dealt only with markets for commodities such as agricultural products and manufactures, that is commodities that can be used as means of production and means of subsistence or luxuries. Smith was very well aware of the fact that especially financial and money markets are very different from commodity markets.

The introduction of paper money on a large scale in France at the beginning of the 18<sup>th</sup> century, which was arguably one of the greatest innovations in the entire history of money and finance, was widely discussed at the time. Smith understood very well that the way it was

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<sup>11</sup> Smith appears to have been overly optimistic in this regard, because an increase in real wages was retarded for quite some time till after the Industrial Revolution had got in full swing, as studies in economic history show. Smith counted first and foremost upon capitalist dynamics, which he hoped would drive up wages despite workers' weak position in society. He indicated that a legal regulation of the labour contract could assist the 'natural' forces and improve the living conditions of workers (see Aspromourgos 2013: 286). He did not foresee, however, the rise of trade unions and their impact on wages.

done brought France to the brink of collapse and was accompanied by what is known as the “Mississippi Bubble”. The introduction of paper money under the Duke of Orléans, the regent of France, was carried out following (at least partly) plans elaborated by John Law, a Scotsman like Smith and an excellent mathematician and gambler. It was meant to reduce the enormous debt the French King had accumulated. Law had argued that there was no danger of inflation and instability, because the counter-value to paper money consisted in (parts of) the land possessed by the King.

Interestingly, Smith approved of the introduction of paper money and compared it explicitly to “some improvements in mechanicks” (WN II.ii.39), that is technical progress, because it allowed the replacement of gold and silver, highly precious metals, by a material whose production costs were close to nil. However, he also saw the dangers associated with the new financial instrument. While “The gold and silver money which circulates in any economy may very properly be compared to a highway”, on which commodities are transported, paper money represents instead “a sort of waggon-way through the air”. The commerce and industry of a country, Smith warned, “cannot be altogether so secure, when they are thus, as it were, suspended upon the *Daedalian wings of paper money*, as when they travel upon the solid ground of gold and silver.” (WN II.ii.86; emphasis added)

He dubbed the plans of the “famous Mr. Law ... splendid, but visionary” (WN II.ii.78). What was needed was an implementation of paper money by a “judicious operation of banking” (WN II.ii.86). In a single paragraph the concept of judicious or “prudent” operation of banking is mentioned four times! Yet even if all bankers were “people of undoubted credit” (WN II.ii.95) this would not be enough to ban all dangers. Smith expounded:

Over and above the accidents to which they [i.e. commerce and industry] are exposed from the unskilfulness of the conductors of this paper money, they are liable to several others, *from which no prudence or skill of those conductors can guard them.* (WN II.ii.86; emphasis added)

His pessimism was rooted in phenomena we nowadays call *asymmetric information*, *moral hazard* and *adverse selection*. These are widespread if not ubiquitous, and even the most judicious regulations of the banking system can only restrict, but not entirely eliminate them.

***Asymmetric information and moral hazard*** “Mean people” will have a particular incentive to become bankers, Smith observed, if they are allowed to issue bank notes for very small sums. As several examples in history show, this triggered large increases of the circulation of paper money, economic crises and the bankruptcy of many banks. The “beggarly bankers”,

Smith warned, may cause “a very great calamity to many poor people who had received their notes in payment.” (WN II.ii.90) From this he concluded that the issuance of bank notes for very small sums ought to be prohibited by law. Notes for large sums ought to be used in transactions amongst merchants, whereas ordinary people ought to use only coins and thus travel upon the solid grounds of silver and gold. His proposal implied the co-existence of two circuits of money that were supposed not to communicate with one another.

Smith was clear that to restrain a banker from issuing small notes “is a manifest violation of that natural liberty which it is the proper business of law, not to infringe, but to support.” He added:

Such regulations may, no doubt, be considered as in some respect a violation of natural liberty. But those exertions of the natural liberty of a few individuals, which might endanger the security of the whole society, are, and ought to be, restrained by the laws of all governments; of the most free, as well as of the most despotical. The obligation of building party walls, in order to prevent the communication of fire, is a violation of natural liberty, exactly of the same kind with the regulations of the banking trade which are here proposed. (WN II.ii.94)

Information asymmetries permeate *The Wealth of Nations*. Smith even classifies the three grand orders of men – landlords, workers and capitalists – according to their members’ access to information and knowledge. (1) Landlords, he writes, receive revenue (rent) that “costs them neither labour nor care, but comes to them, ... independent of any plan or project of their own.” This makes them indolent and “renders them too often, not only ignorant, but incapable of that application of mind which is necessary in order to foresee and understand the consequences of any publick regulation.” (WN I.xi.p.8) (2) Things are worse with respect to the second order of people: the worker’s “condition leaves him no time to receive the necessary information, and his education and habits are commonly such as to render him unfit to judge even though he was fully informed.” The worker is most in danger of being manipulated: “In the publick deliberation, therefore, his voice is little heard and less regarded, except upon some particular occasions, when his clamour is animated, set on, and supported by his employers, *not for his, but their own particular purposes.*” (WN I.xi.p.9; emphasis added) (3) The people that are best informed in economic and political matters are merchants and master manufacturers, who “during their whole lives ... are engaged in plans and projects”, and who, therefore, “have frequently more acuteness of understanding than the greater part of country gentlemen.” (WN I.xi.p.10) These men, possessed of a “superior

knowledge of their own interest”, are on the one hand the source of economic development. Their selfishness may, however, be detrimental to the interests of the other classes and society at large. Smith insists with special reference to the ‘dealers’ or market intermediaries:

The interest of the dealers, however, in any particular branch of trade or manufactures, is always in some respects different from, and even opposite to, that of the publick. To widen the market and to narrow the competition, is always the interest of the dealers. To widen the market may frequently be agreeable enough to the interest of the publick; but *to narrow the competition must always be against it, and can serve only to enable the dealers, by raising their profits above what they naturally would be, to levy, for their own benefit, an absurd tax upon the rest of their fellow-citizens.*

Smith continues in an alarming tone:

The proposal of any new law or regulation of commerce which comes from this order, ought always to be listened to with great precaution, and ought never to be adopted till after having been long and carefully examined, not only with the most scrupulous, but with the most suspicious attention. *It comes from an order of men, whose interest is never exactly the same with that of the publick, who have generally an interest to deceive and even to oppress the publick, and who accordingly have, upon many occasions, both deceived and oppressed it.* (WN I.xi.p.10; emphases added)

Those who are better informed – dealers, merchants, manufacturers and moneyed men – may use their superior knowledge to the detriment of others, whether in discussions of political matters or in economic transactions. Their counterparts – customers, consumers, and, in general, workers – are in danger of being “pulled over the barrel”, as the proverb says: they are exposed to moral hazard. Smith stressed especially that bankers are willing to take risks, knowing that in case of failure the potential costs of their decisions will be borne by others.<sup>12</sup>

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<sup>12</sup> Interestingly, Robert Lucas Jr. opined: “I think of all progress in economic thinking, in the kind of basic core of economic theory, as developing entirely as learning how to do what Hume and Smith and Ricardo wanted to do, only better. (Lucas 2004: 22) Can Smith (or Hume or Ricardo) be said to have entertained the view that a society whose members are characterised by conflicting interests and asymmetries in economic power and information levels be analysed in terms of a single “representative agent”? Certainly not. Lucas’s claim that his analysis is rooted in that of the classical economists is without any foundation. What can at most be said is that the classical economists contemplated the interplay of different representative agents, where each agent represents either a class of people (workers, capitalists, landlords) or a group within a class (e.g. merchants, masters, moneyed men).



**Adverse selection** Smith stressed that projects that exhibit a higher expected profitability are typically also more risky.<sup>13</sup> As the recent financial crisis illustrated once again, many people ignored this fact. They fell victim to “irrational exuberance” (Alan Greenspan). Smith’s respective observations read like a commentary on the crisis. With the (occasionally hypertrophic) growth of a bank’s business, bankers “can know very little about [their debtors]”. They give money to

chimerical projectors, the drawers and re-drawers of circulating bills of exchange, who would employ the money in extravagant undertaking, which, with all the assistance that could be given them, they would probably never be able to compleat, and which, if they should be compleated, would never repay the expence which they had really cost ...  
(WN II.ii.77)

The problem, Smith stressed, is that “chimerical projectors” are willing to offer high rates of interest to banks because they expect very high profits from their “extravagant undertaking”, and, should the undertaking fail, do not intend to pay back the debt. The “sober and frugal debtors”, who “might have less of the grand and the marvellous, [but] more of the solid and the profitable”, on the contrary would, after careful calculation, be prepared to pay only a lower rate of interest. Banks can therefore be expected to go for the chimerical and not for the sober and frugal. This leads to an adverse selection, which transfers a great part of the capital of a country “from prudent and profitable, to imprudent and unprofitable undertakings” (WN II.ii.77).

Smith opposed the prohibition of interest taking – the laws against “usury”, as they existed in several countries at his time. “This regulation”, he wrote,

instead of preventing, has been found from experience to increase the evil of usury; the debtor being obliged to pay, not only for the use of the money, but for the risk which his

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<sup>13</sup> With regard to different employments of capital Smith stresses: “The ordinary rate of profit always rises more or less with the risk.” (WN I.x.b.33). He exemplifies this in terms of foreign trade, which may be considered to be more profitable, but also more risky. Caring for the security of his investment and being possessed of a risk-averse attitude, the typical investor, Smith surmises, can be expected to employ his capital at home. He thus supports domestic rather than foreign industry, “led by an invisible hand to promote an end which was no part of his intention” (WN IV.ii.9). But there is also the other side of the coin: man typically shows a “contempt of risk and the presumptuous hope of success” (WN I.x.b.29), a fact around which the discussion in the section above revolves.

creditor runs by accepting a compensation for that use. *He is obliged, if one may say so, to insure his creditor from the penalties of usury.* (WN II.iv.13; emphasis added)

Yet he advocated a legal upper boundary to the rate of interest, which “ought not to be much above the lowest market rate”. If there was no such upper limit, or if the legal rate was fixed at too high a level,

the greater part of the money which was to be lent, would be lent to prodigals and projectors, who alone would be willing to give this high interest. Sober people, who will give for the use of money no more than a part of what they are likely to make by the use of it, would not venture into competition. A great part of the capital of the country would thus be kept out of the hands which were most likely to make a profitable and advantageous use of it, and thrown into those which were most likely to waste and destroy it. Where the legal rate of interest, on the contrary, is fixed but a very little above the lowest market rate, sober people are universally preferred, as borrowers, to prodigals and projectors. The person who lends money gets nearly as much interest from the former as he dares to take from the latter, and his money is much safer in the hands of one set of people, than in those of the other. A great part of the capital of the country is thus thrown into the hands in which it is most likely to be employed with advantage. (WN II.iv.15)

The argument shows that for Smith the question was not whether or not the banking trade ought to be regulated: the answer was a resounding yes. The question was rather which regulations would look after “the security of the whole society” and at the same time leave enough room for the pursuit of self-interest and allow banks to provide the needed credit for doing so.

To conclude, we address briefly what in Smith’s view constituted a major threat to competitive conditions and thus the system of natural liberty – the wretched spirit of monopoly.<sup>14</sup>

## **7. The “wretched spirit of monopoly”**

This spirit was constantly seeking possibilities to remove competition and establish monopolistic conditions. The monopolist does not have to fear competitors, who underbid his

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<sup>14</sup> For a comprehensive discussion of Smith’s theory of monopoly, see Salvadori and Signorino (2014).

price, take away from him a part of the market and profits. Monopolies are able “to keep up the market price, for a long time together, a good deal above the natural price” (WN I.vii.20). The difference between the monopoly and the natural price is pocketed as super-normal profit. Hence, to stop competition is in the interest of the single merchant and master manufacturer because it is profitable to do so. Smith’s concept of monopoly is much broader than the modern one, which restricts the term to the case in which there is basically only a single producer and seller. In Smith a lasting difference between the market and the natural price is the characteristic feature of a monopoly, that is, gravitation is blocked. In terms of our system of price equations (1), the competitive rate of profits  $r$  would have to be replaced by differential rates  $r_1, r_2, \dots, r_m$  – one for each sector, where  $r_j > 0, j = 1, 2, \dots, m$ , and each set of (feasible) rates would typically be accompanied by a different set of relative prices. We may illustrate this in terms of just two sectors. In Figure 3 the real wage rate in terms of one of the commodities  $\omega$  is measured along the vertical axis, whereas the sector-specific profit rates  $r_1$  and  $r_2$  are measured along the two axes on the bottom plane. At a given natural wage rate  $\omega^*$ , the uniform competitive rate of profits  $r^*$  ( $= r_1 = r_2$ ) would be given by the intersection of the  $45^\circ$  line and the intersection of the  $r_1$ - $r_2$ - $\omega$  relationship (also known as “wage frontier”; see Kurz and Salvadori 1995: 50-51) and the plane parallel to the level  $\omega^*$  of the real wage rate. If in one sector producers are able to pocket a higher rate of profit than the natural one, because of monopolistic privileges, and if the real wage rate happens to be unaffected by this, then the rate of profit in the other sector will have to be smaller than the natural one. In Fig. 3 such a constellation is given by  $r_2 > r^* > r_1$ . Hence the three distributive variables are not independent of one another: given any one of them, the other two are inversely related.<sup>15</sup> Smith showed some awareness of this (although there are passages in *The Wealth* that shed doubts on his understanding). He also understood somewhat that changing income distribution, that is, in the present analytical framework: hypothetically moving on the surface of the wage frontier, would be accompanied by changes in relative prices (see Kurz and Storn 2013a: section 2.6.3).

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<sup>15</sup> To provide a recent example: When the former CEO of Deutsche Bank, Josef Ackermann, requested a rate of return of 25% for his business, this should have been understood as a sort of declaration of war in the dispute over the distribution of income to the other industries in the economy and to workers. Clearly, for given technical conditions of production one side can only gain at the cost of some other side(s).



to strict requirements and severe supervision and control. The English East India Company and similar companies are forbidding examples of the enormous damage legal monopolies can cause that are not so:

The constant view of such companies is always to raise the rate of their own profit as high as they can; to keep the market, both for the goods which they export, and for those which they import, as much understocked as they can: which can be done only by restraining the competition, or by discouraging new adventurers from entering into the trade. (WN V.i.e.10)

And elsewhere Smith observes:

Some nations have given up the whole commerce of their colonies to an exclusive company, of whom the colonists were obliged to buy all such European goods as they wanted, and to whom they were obliged to sell the whole of their own surplus produce. It was the interest of the company, therefore, not only to sell the former as dear, and to buy the latter as cheap as possible, but to buy no more of the latter, even at this low price, than what they could dispose of for a very high price in Europe. It was their interest, not only to degrade in all cases the value of the surplus produce of the colony, but in many cases to discourage and keep down the natural increase of its quantity. Of all the expedients that can well be contrived to stunt the natural growth of a new colony, that of an exclusive company is undoubtedly the most effectual. (WN IV.vii.b22)

The rule of such companies in the colonies was typically violent and cruel. And while Smith was a fervent advocate of free trade, he deplored the fact that “The savage injustice of the Europeans rendered an event, which ought to have been beneficial to all, ruinous and destructive to several of those unfortunate countries.” (WN IV.i.32)

Finally, we must discuss briefly Smith’s view of the determination of wages in Chapter VIII of Book I of *The Wealth of Nations* and whether it is related to the problem of monopoly. Smith emphasised that there is a conflict over the distribution of income:

What are the common wages of labour depends every where upon the contract usually made between those two parties, whose interests are by no means the same. The workmen desire to get as much, the masters to give as little as possible. The former are disposed to combine in order to raise, the later in order to lower the wages of labour. (WN I.viii.11)

He added:

It is not, however, difficult to foresee which of the two parties must, upon all ordinary occasions, have the advantage in the dispute, and force the other into compliance with their terms. [1] The masters, being fewer in number, can combine much more easily; and [2] the law, besides, authorises, or at least does not prohibit their combinations, while it prohibits those of the workmen. We have no acts of parliament against combining to lower the price of work; but many against combining to raise it. In all such disputes the masters can hold out much longer. ... [3] [Masters] could generally live a year or two upon the stocks which they have already acquired. Many workmen could not subsist a week, few could subsist a month, and scarce any a year without employment. (WN I.viii.12)

Because of the reasons [1]-[3] given, workers' bargaining position is weak and they must typically accept the conditions dictated by employers in the "dispute" over wages. "Masters", Smith observed, "are always and every where in a sort of tacit, but constant and uniform combination, not to raise the wages of labour above their actual rate. To violate this combination is every where a most unpopular action, and a sort of reproach to a master among his neighbours and equals." He added: "We seldom, indeed, hear of this combination, because it is the usual, and one may say, *the natural state of things* which nobody ever hears of." (WN I.viii.13; emphasis added) It is only in conditions of swift economic expansion, when the growth of the demand for hands exceeds the supply that masters violate the combination:

The scarcity of hands occasions a competition among masters, who bid against one another, in order to get workmen, and thus voluntarily break through the natural combination of masters not to raise wages. (WN I.viii.17)<sup>16</sup>

The combination of masters not to raise (and possibly even to reduce) wages Smith interestingly calls the "natural state of things". The success of masters in this regard would therefore lead to a lower real wage ( $w$  in Section 3 or  $\omega$  in the present section), but not necessarily to a distortion of competitive conditions between different sectors reflected in differential profit rates.<sup>17</sup> In terms of Alfred Marshall's distinction between "class conflicts"

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<sup>16</sup> In Smith the level of the real wage rate is contingent upon the balance of power between workers and masters, which in turn depends inter alia on the rate of capital accumulation.

<sup>17</sup> Smith's idea was picked up by several authors and may be seen to be at the origin of the concept of "class monopoly" as it was advocated, for example, by the German

and “trade conflicts” – that is, the “discord of interest among the several sections of a nation, and between each of those sections and the nation as a whole” (Marshall [1919] 1920: 17) – we would have to speak of a class conflict. But in case monopolistic privileges of some industry impact negatively both on the profits of capitalists in other industries and on the wages of workers in general, we would have a superposition of both types of conflict, and Smith’s respective disquisition would have also a bearing on the theme dealt with in this section.

## 8. Concluding remark

Markets and trade are, in principle, good things – provided there is competition. But competition is always in danger of being undermined and eroded, giving way to monopolies which are very comfortable and highly profitable to monopolists and may spell great trouble for many people. In Smith’s view Political Economy – as an important and perhaps even the most important part of a kind of master political science, encompassing the *science of the legislator* – has the task to fight superstition and false beliefs in matters of economic policy, to debunk opinions that present individual interests as promoting the general good, and to propose a regulatory framework for markets and institutions that helps to ward off threats to the security of the society as a whole and provide incentives such that self-seeking behaviour has also socially beneficial effects.

The paper shows that the ideas of Adam Smith still may resonate and illuminate problems of today and theories, which try to tackle them.

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