

Did Adam Smith Miss the Chance to State the Goal and Structure of Sustainability Markets in His Time? If Yes, Which Could Be Some of the Possible Reasons Behind That?

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Abstract

At the time of Adam Smith the structure of reality in which the formal economy came to exist had the structure of a complex sustainability market, where there is full inclusion and no externality neutrality. If the prevailing economic view at that time would have been proactive in terms of envisioning markets with social and environmentally caring invisible hands then probably Adam Smith would have used that complex sustainability structure to state then the goal, form and relevant aspects of sustainability markets and make them the heart of the formal economy. These fully inclusive markets would have brought us through a slow, but optimal growth path.

However, the dominant view during the industrial revolution period appears to have been that there were no social limits nor environmental limits to economic growth; and that may be the reason why Adam Smith went to state at that time the goal, structure and relevant aspects of the traditional market ruled by a fully uncaring invisible hand as the soul of the formal economy. These markets have brought us since the industrial revolution to now through a fast bare growth path.

Adam Smith's traditional market model went without any formal academic challenge since the industrial revolution to 1987 when the Brundtland Commission pointed out: a) that it was not working given the increasingly worse and worse poverty and environmental conditions that have come with it; and b) that it needed to be fixed immediately by making it socially and environmentally friendly and inclusive. And that meant that we needed a caring invisible hand after all in the market since the industrial revolution and hence we need to fix Adam Smith economy only model now. Recently even Pope Francis has called for environmental and social justice in our modeling. The above raises the questions, Did Adam Smith missed the chance to state the goal and structure of sustainability markets in his time? If yes, which could be some of the possible reasons behind that?

Key words

Adam Smith, sustainability markets, traditional markets, optimal growth, optimal profits, bare growth, bare profits, caring invisible hand, uncaring invisible hand, slow growth path, fast growth path, informal economy, formal economy, limits to growth, man-made markets.

Introduction

Economic markets have evolved as human societies have evolved from no clear market rules to formal market rules. To present the ideas in this paper and be able to highlight the development reality that existed in 1776 when Adam Smith published “The Wealth of Nations” it will be assumed that development has gone through three evolution periods: the nomadic period, the sedentary to preindustrial revolution period; and the industrial revolution period, when Adam Smith lived.

a) The nomadic period

It can be said that in the nomadic period there were only two main factors in development society(A) and the environment(C) as there were no clear economic market rules. This situation is represented in Figure 1 below:

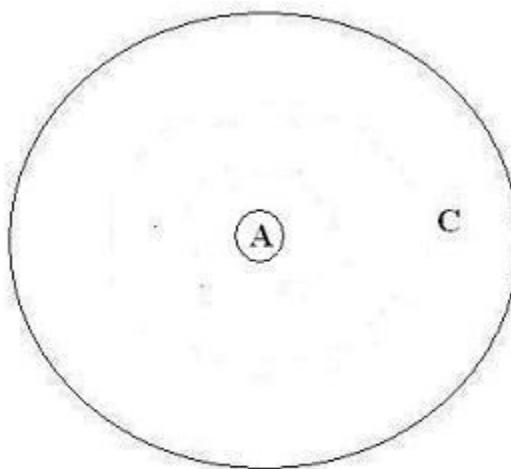


Figure 1 The nomadic period, no clear economic structure existed.

From Figure 1 above it can be appreciated that the society(A) impact on the environment(C) was minimal as human move from place to place gathering food and hunting in

small groups. Nomadic life took place since the beginning of human life to about 8000 BC when agriculture was discovered(TSF 2012) . And perhaps the environment(C) had bigger influence on society(A) and its evolution than society(A) on the environment(C), a situation currently being confirmed(NRC 2010). The continuous line circle represent the existence of social(A) limits and environmental(C) limits to growth and the capital letters indicate that both society(A) and environment(C) are active components of the nomadic period system.

b) The sedentary to preindustrial revolution period(8000 BC to 1750)

It can be said that from the beginning of the sedentary period(8000 BC) to the end of the preindustrial revolution period(1750) societies established informal market structures to be able to deal with agricultural production and trade and access to land even not yet in production. The expansion of agriculture is considered a key revolutionary event in human history(TSF 2012) that continued to evolve towards industrialization to just before the industrial revolution 1750. The coming of the informal economy(b) is summarized in Figure 2 below:

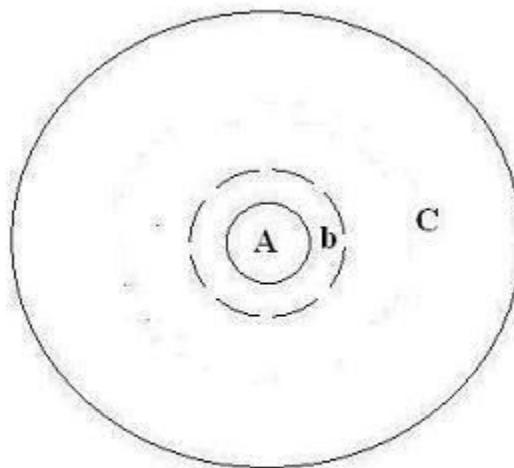


Figure 2 The sedentary to pre-industrial period: An informal economic structure existed.

In Figure 2 above there is a broken line circle representing the informal economy(b) interacting with society(A) and the environment(C) in passive form and placed between them. This informal economic system(b) was used to deal first with the establishment and expansion of agricultural activities and later with the first steps of industrialization.

The continuous line circle represent the existence of social(A) limits and environmental(C) limits to growth, the broken circle says that there are no economy limits to growth, and the capital letters indicate that both society(A) and environment(C) are active components of the system, but the informal economy(b) is a passive component. And notice that the circle for society(A) in Figure 2 is intended to be bigger than in Figure 1 indicating

population growth and a greater social impact on the environment as compared to the nomadic period. We know now that green house gas concentrations up to before the industrial revolution were small and they came mostly from natural processes(Jansen et al 2007), but should be expected to be bigger than concentrations during the nomadic period.

c) The industrial revolution period(1750-1850)

It can be said that the formal economy(B) was established during the industrial revolution period to expand industrialization locally, regionally and globally. Between 1750-1850 most of the key events marking the beginning of rapid industrialization in England happened such as inventions and spread of steam railways(More 2000). The formalization of the economy(B) is summarized in Figure 3 below:

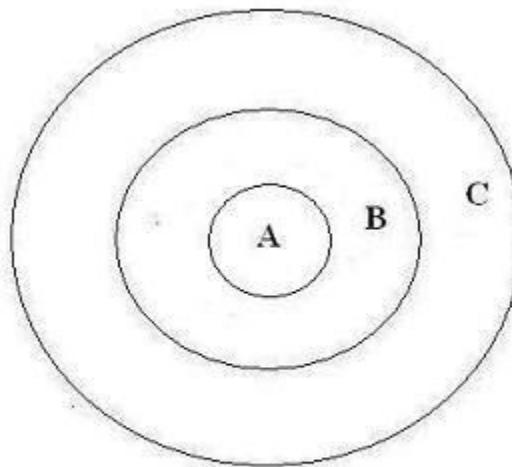


Figure 3 The industrial revolution period: The formal economy appeared.

In Figure 3 above there is a continuous line circle representing the formal economy(B) interacting with society(A) and the environment(C) in active form and placed between them. This formal economic system(B) was used to promote and expand industrialization processes. The continuous line circle represents the existence of social(A) limits, environmental(C) limits, and economic limits(B) to growth. And the capital letters indicate that all society(A) , the formal economy(B), and environment(C) are active components of the industrial development system.

And finally Figure 3 above can also be used to highlight that development has three components, social(A), economic(B) and environmental(C). Please notice that the social(A) circle in Figure 3 is intended to be bigger than the social(A) circle in Figure 2 and Figure 1 indicating population growth; and the circle of the formal economy(B) in Figure 3 is intended to

be bigger than that of the informal economy(b) in Figure 2 indicating economy expansion. This is to indicate that during the industrial revolution society(A) and the formal economy(B) have a greater environmental impact compared to previous periods. Green house gas concentrations or increases were bigger during the industrial revolution time than preindustrial times and mostly non-natural processes((Jansen et al 2007).

d) The need to expand the benefits of industrialization

There were then two ways during the industrial revolution to formalize the working of the economy based on the development reality captured in Figure 3 in order to expand the benefits of industrialization under the guidance of free men and free markets, which are: a) A complex model based on a slow growth approach, where the formal economy(B) is an equal partner in a sustainability market; and b) A simple model based on a fast growth approach, where the formal economy(B) is the only source of development and the heart of the traditional market. The world depicted in Figure 3 is the one in which Adam Smith lived and when he wrote his 1776/The world of Nations. Adam Smith lived from 1723 to 1790 when dramatic change and expansion was taking place in England and his native Scotland(Macfarlane 2013); and therefore he lived at the core of the industrial revolution period. It just happened that Adam Smith chose to state the fast growth approach, not a slow growth approach, as the heart the formal economy to expand the benefits of industrialization and economic development, which raises the questions: Did Adam Smith missed the chance to state the goal and structure of sustainability markets in his time? If yes, which could be some of the possible reasons behind that?

Objectives

This paper has four objectives: a) To point out the nature of the development reality that existed during the industrial revolution period when the formal economy came to exist; b) To highlight that Adam Smith based on the development reality he had in front of him had two different approaches to choose, sustainability market or traditional market; c) To point out that perhaps he missed the chance to state the goal and structure of sustainability markets when stating the traditional market model and to ponder why; and d) to show how Adam Smith's market would look after fully and partially correcting it to reflect social and/or environmentally friendliness as requested by the Brundtland Commission in 1987.

Methodology

First, the qualitative comparative terminology used in this paper is listed. Second, some operational concepts are provided. Third, the development reality at the time of Adam Smith is highlighted. Fourth, the choices Adam Smith had to make one of them the heart of the formal economy are described in detail.

Fifth we ponder some possible reasons that may explain why Adam Smith's decided to go the way of the traditional market, Sixth, the Brundtland commission's 1987 criticism of the traditional model indicating the model was not working and it needed immediate fixing is highlighted as well as how the markets would look after fully and partially fixing it. Seventh, some food for thoughts is shared. And finally, some specific and general conclusions

Qualitative Comparative Terminology

A = Society dominant	a = Society passive
B = Economy dominant	b = Economy passive
C = Environment dominant	c = Environment passive
S = Sustainability market	s = Unsustainability market
T = Traditional market	t = Non-traditional market
G = Green market	g = Non-green market
D = Development	D* = Optimal development

Operational concepts

- i) **Total friendliness**, *when there is total inclusion*
- ii) **Partial friendliness**, *when there is partial inclusion*
- iii) **Total unfriendliness**, *when there is total exclusion*
- iv) **Partial unfriendliness**, *when there is partial exclusion*
- v) **Optimal profit**, *the maximum profit you can get under total friendliness*
- vi) **Bare profits**, *the maximum profit you can get under total unfriendliness*
- vii) **Sustainability profit**. *the optimal profit*
- viii) **Traditional market profit**, *the bare market profits*
- ix) **Fully irresponsible invisible hand**. *a totally uncaring invisible hand*

- x) **Partially irresponsible invisible hand**, *a partially uncaring invisible hand*
- xi) **Fully responsible invisible hand**, *a fully caring invisible hand.*
- xii) **Totally irresponsible self interest**, *fully impersonal force.*
- xiii) **Partially irresponsible self interest**, *a partially impersonal force,*
- xiv) **Totally responsible self-interest**, *a fully personal force.*
- xv) **The life of the traditional market**, *full competition*
- xvi) **The life of the sustainability market**, *full cooperation*
- xvii) **A totally uncaring person**, *assumes or acts like others do not exist to maximize profits, that is someone acting self-interestedly, right?....The invisible hand in the rational market acts as society and environment do not exist as they are not endogenous factors to the model.*
- xviii) **A partially uncaring person**, *assumes or acts like others do not exist to maximize green profits, that is someone acting self-interestedly, right?....The invisible hand in the eco -economic market acts as if society does not exist as it is not an endogenous factor in the model.*
- xix) **A totally caring person**, *assumes and acts as equal partner in the system seeking optimal profit, this is not someone not acting self-interestedly right?...The invisible hand in sustainability markets acts accordingly with the optimal interest of the system as all factors, economy, society, and environment are endogenous factors in the model.*
- xx) **Sustainability markets**, *require optimization*
- xxi) **Unsustainability markets**, *require maximization*
- xxii) **Traditional market**, *the economy only market*
- xxiii) **Economic man**, *a socially and environmentally irresponsible man.*
- xxiv) **Invisible hand**, *a socially and environmentally irresponsible hand.*
- xxv) **Green markets**, *they are eco-economic markets*
- xxvi) **Green economic man**, *an environmentally responsible economic man*
- xxvii) **Green invisible hand**, *an environmentally responsible invisible hand.*

The world at the time of Adam Smith

Figure 3 above summarizes the development structure or reality that existed during the industrial revolution period, the period in which Adam Smith lived; and when he wrote and published his ideas including “The Wealth of Nations in 1776. And the structure of reality in Figure 3 is what it is known as the original sustainability market(Muñoz 2012) reflecting fully the complexity it represents: The society(A), the economy(B) and the environment(C) acting conjuncturally in active form.

The choices Adam Smith had to make one of them the heart of the formal economy

Bevilacqua(1965, Pp.44, 50) indicates the following about Adam Smith: i) that he had a preference for finding ways to communicate ideas in manners that are persuasive or entertaining; ii) that he contemplated complex vrs simple models of ideas when looking at the reality and ways to communicate it, but he preferred simple models; and iii) by adopting this simple model philosophy he went from total empiricism to partial empiricism as now observable and non-observable factors have a role in the model.

Therefore, consistent with the development reality and complexity in Figure 3 above Adam Smith had two clear, but very different choices as candidates to make one of them the body of the formal economy in his time, the sustainability market and the traditional market.

Below is a summary of the choices Adam Smith had and the choice he made.

a) The sustainability market choice

1) Keeping the complexity of the industrial revolution period development reality

If Adam Smith thought the economy could in the very long term lead to an increase in the deterioration of social and environmental systems even to the point of collapse, he could have concluded that society and environment needed protection. In that case he would have kept all observable factors, society(A), economy(B), and environment(C) as endogenous active factors within the model and reflecting this complexity as the structure of the sustainability market as shown in Figure 4 below:

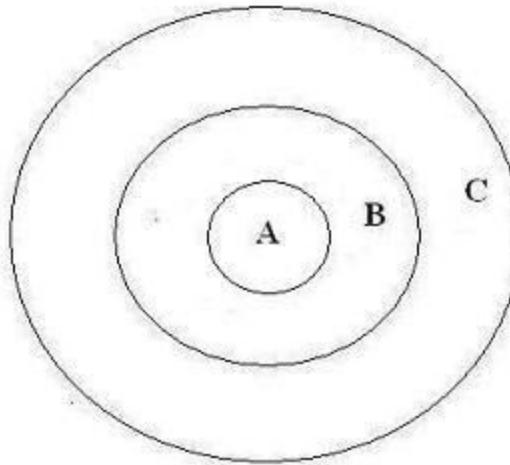


Figure 4 The sustainability market(S): A full inclusion market

Figure 4 above allows us to see that in the sustainability market society(A), economy(B), and environment(C) are equal partners in development. There is no dominance in the sustainability market(Muñoz 2002). By doing that Adam Smith would have led rational economic agents to choose only those profitable economic options that are socially and environmentally friendly at the same time leaving no room for unaccountable externalities.

2) Stating the nature of the sustainability market model

Consistent with the complexity summarized in Figure 4 above Adam Smith could have stated the goal, structure and aspects of the sustainability market(S) as follows:

The nature of sustainability markets

Goal: Optimizing profits

Structure: Optimal development = D^* = S = ABC = Sustainability market

Nature of invisible hand = A fully caring invisible hand

The perfect market = A caring market

Market characteristics = Full inclusion and cooperation

Promotes: Responsible liberalism

Individual behavior: Responsible rationality

Expectation: Responsible self-interest will be a friend to social and environmental wellbeing under free men and markets

Agent: A fully responsible force is behind the sustainability man.

Therefore, sustainability markets are about slow, but optimal development paths as they follow totally responsible self-interest as there is not social and environmental neutrality assumption here; and therefore all factors are in active form.

3) The unity of Sustainability markets

Since sustainability markets are fully inclusive markets and factors act conjuncturally they required unity, all factors are required to act responsibly as indicated in Figure 5 below:

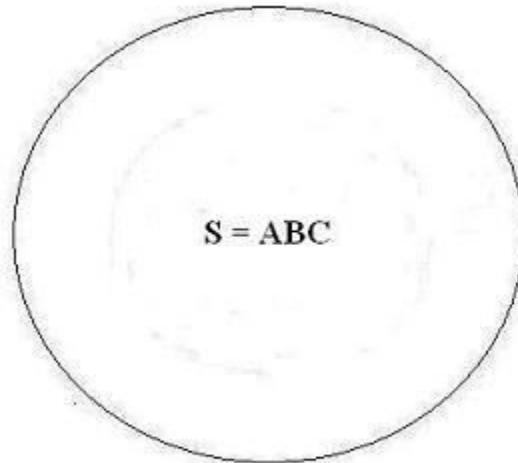


Figure 5 The unity of sustainability markets(S)

Therefore, as it can be seen in Figure 5 above sustainability requires the planning and implementation of only profitable economic choices that are socially and environmentally

friendly at the same time. The unifying nature of sustainability has been recently highlighted in detail(Muñoz 2015b).

b) The traditional market choice

1) *Simplifying reality to make the traditional market fit*

However, since Adam Smith apparently believed that the economy could not neither in the very long term cause increased deterioration of social and environmental systems specially to the point of collapse he stated the traditional market model excluding outright social and environmental issues from the development model transforming Figure 3 into Figure 6 below:

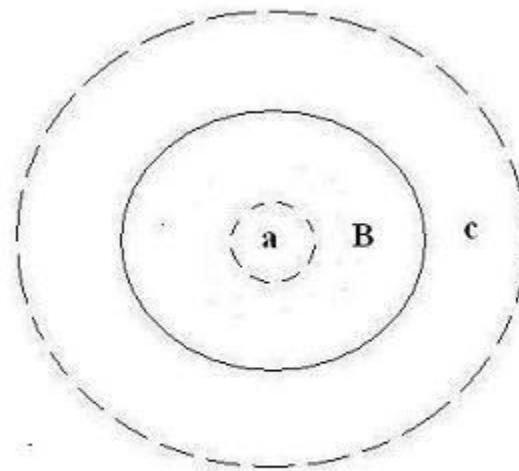


Figure 6 The traditional market model, only the economy matters

As it can be seen in Figure 6 above Adam Smith chose to simplify the reality in Figure 3 in an extreme manner to make it an economy only dominated reality. We can also see in Figure 6 above that the traditional market(T) is a fully exclusive model as society(a) and the environment(c) are both in passive form and only the economy(B) is in active form. Also it can be point out that the traditional market shown in Figure 6 above is known as man-made market type I as two components of the system have been assumed away(Muñoz 2012).

2) *Stating the traditional market model*

Since Adam Smith concluded that society and environment needed no protection as indicated in Figure 6 above he stated the goal, structure, and aspects of the traditional market(T) as indicated below:

The nature of the traditional market

Goal: Profit maximization

Structure: Development = D = T = aBc = Traditional market

Nature of invisible hand = A fully uncaring invisible hand

The perfect market = An uncaring market

Market characteristics = Exclusion and competition

Promotes: Liberalism

Individual behavior: Irresponsible rationality

Expectation: Irresponsible self-interest will be a friend to society wellbeing

under free men and markets

Agent: A fully irresponsible force is behind the economic man

Therefore, the traditional market(T) requires the planning and implementation of profitable economic choices, which is the only requirement as it assumes total social and environmental neutrality.

3) The dominance of the economy

Therefore, in the traditional market(T) the only dominant component in the system is the economy(B) as shown in Figure 7 below. Society(a) and environment(c) are passive components so the economy(B) can use them at will to generate wealth.

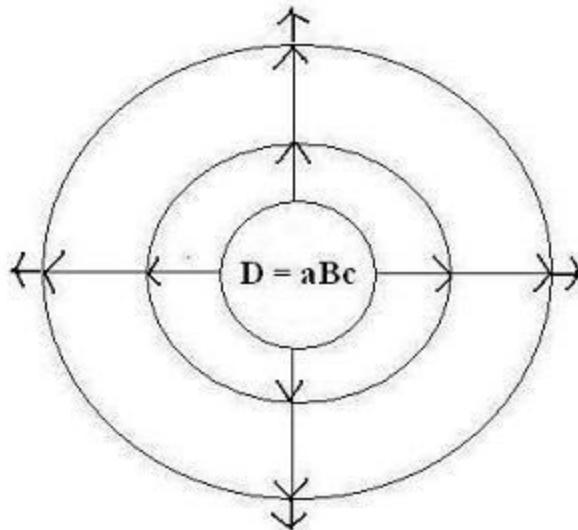


Figure 7 The dominant economy model, a model that always grows

More over, the traditional market(T) is a market where growth can always takes place expanding and expanding without social and environmental limits as the limits are passive. In other words, the traditional market(T) is a model that always grows as shown in Figure 7 above.

Pondering Adam Smith's decision to go for the traditional market model

a) If Adam Smith thought that social and environmental protection/inclusion was needed in his time, but he went to the way of the traditional market anyway, this may have happen because of

- i) **A love for simplicity over complexity:** We know Adam Smith preferred the Newtonian method for its simplicity and elegance(Bevilacqua 1965, P.50). And this may have let him to assume that free markets would have a minimal or no negative impact on society and environment, they would have only a positive impact.
- ii) **Political pressure:** A complex market would have slow down the industrialization process and it may even have been perceived as radical proposition if seen as advocating social and environmental protection, but a simplified market would speed it up; and therefore, monarchs and governments and inventors of the time would more quickly endorse an approach leading to faster economic expansion than one of slow economic expansion. Elliott(1990) points out that Adam Smith came to be known quickly as the “mightiest monarch in Europe” as his reputation grew.

iii) **An underestimation of the power that a free market economy has to over exploit social and environmental systems.** Smith(2003) highlights that Adam Smith thought that society's interest may not be the same and sometimes it is even the opposite as merchant's interest as merchants would use government intervention to keep prices and profits up, but the free market would have their best interest at heart. Nothing seems to be then said about the need for environmental protection within the free market too. West(1990) points out that Adam Smith believed that in a free market self-interest would be an ally, not an enemy of the prosperity in society if it is harnessed well.

iv) **A better way to topple the mercantilistic model of his time.** A simple model can be more persuasive as it is easier to communicate or sell as a market liberating model. Adam Smith believed at heart that free markets were good for the economy and society and that mercantilistic protection was bad. He believed that even men pursuing "their rawest self-interest" "would not bring chaos, but balance to the interaction of supply and demand(Rosten 1990) if the market is left free of government regulation. In his mind perhaps Adam Smith expected to see a fully responsible invisible hand working in free markets, but his theory led to a fully irresponsible invisible hand taking over those markets as they would strictly follow the maximization requirement. The financial crisis of 2008 shows that markets without regulation tend towards riskier behavior and failure especially under monopolistic conditions(Muñoz 2015a).

v) **All or any combination of the above,** the truth is that we will probably never know if Adam Smith really thought that social and environmental protection/inclusion was needed in his time and forward into the future.

b) If Adam Smith really thought that social and environmental protection/inclusion was not needed in his time and forward into the future; and that is why he went the way of the traditional market and not the sustainability market, then he missed the reality of his time. He sent us in what now we know was and is the wrong development path in sustainability terms as to create wealth all over the world we have caused great social and environmental pain.

c) In summary: Whether intentionally or not the implementation and promotion of the traditional market of Adam Smith as the formal economy since the industrial revolution has led us to the two main crises we have today, environmental poverty and social poverty.

The Brundtland commission criticism of the model of 1987

The Brundtland Commission 1987 Report "Our Common Future" was the first formal challenge that Adam Smith's traditional market theory had. It said clearly the traditional model in place since the industrial revolution to 1987 was not working and it needed to be made inclusive and friendly to society and environment as soon as possible given current levels of poverty and environmental degradation(WCED 1987). Karl Popper highlighted that we can

refute theories based on observation or experimentation and when this happens sometimes we correct them and learn from our mistakes, which only happens perhaps in science to record progress in knowledge(Popper 2002); and Vernier(1990; P.60) point out the view of Joseph Presley, an scholar contemporary of Adam Smith, saying that we should let men act in total freedom when dealing with complexity until evidence of inconveniences caused by their actions are detected. And the evidence of increasing poverty and environmental deterioration highlighted by the Brundtland Commission in 1987 provided the grounds for critiquing and refuting at least indirectly Adam Smith's model and led to the commission's call for corrections.

The commission's formal critique shows that both the invisible hand in Adam Smith's model and the expected trickled down effect associated with his model have not worked as expected given the observed deterioration of social and environmental system and the growing social and environmental inequality. We know now the trickled down effect does not work(Frank 2007; Olinsky and Mayerson 2013); and it will never work to help the poor to be active participants in economic and/or environmental markets because it is not the trickledown effect that explains the worsening of poverty conditions and inequality under Adam Smith's model since the industrial revolution to today, it is the embudo effect(Muñoz 2009): **More of the development benefits are absorbed at the top and very little if none reaches the bottom.**

The Brundtland Commission thought that the best ways to fix the problem were sustainable development approaches and it did not choose a sustainability framework. After the coming of different and competing types of sustainable development models since 1987 starting with the concept provided by the commission itself the testing process has led us now to the dominant model of today, the eco-economic development or green economic development model. Green growth was formally accepted as the dominant development paradigm in 2012 at the Rio + 20 conference(UNCSD 2012a; UNCSD 2012b).

Surprisingly by May 2015 the poverty issue and the environmental issue we are facing today are even in more critical shape than they were in 1987 despite almost 28 years of sustainable development(1987-2015) a fact highlighted by Pope Francis in his encyclical letter "Laudato Si of the holy father Francis-On care for Our Common Home"(Vatican 2015). How much more observable poverty and environmental degradation is needed or needs to be created to finally directly and loudly refute Adam Smith's traditional market model a la Karl Popper; and validate formally the current shift to the eco-economic market and/or contemplate a future shift towards sustainability markets?

a) Full implementation of the Brundtland Commission fixing request

If we fully implement the Brundtland Commission fixing request we have to make Adam Smith's traditional market model inclusive and socially and environmentally friendly at the same time, and when doing so Figure 6 is transformed into Figure 8 below:

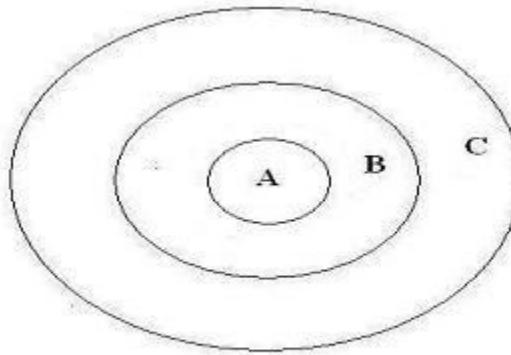


Figure 8 The fully corrected model: A full inclusion model, the sustainable market model

Please notice that the fully corrected market in Figure 8 looks the similar as the one in Figure 4 and Figure 3. In others words, Figure 8 reflects the same reality in Figure 3 that existed in during the industrial revolution and when Adam Smith stated the traditional market model. Also notice that the fully corrected market in Figure 8 is a sustainability market as shown in Figure 4, a totally inclusive market. Details and ideas about how traditional markets can be corrected to transform them into sustainability markets have recently been shared(Muñoz 2010; 2012). In other words, Figure 8 above signals the end of the economic man and of the green economic man; and the birth of the sustainability man.

b) Partial implementation of the Brundtland Commission fixing request

If we want to make Adam Smith's traditional market model found in Figure 6 environmentally friendly only we are partially implementing the fixing request of the Brundtland Commission, which is indicated in Figure 9 below:

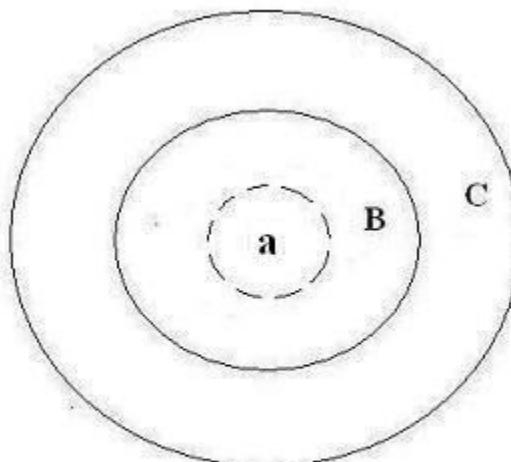


Figure 9 A partially corrected model: The green economy or eco-economic model

The eco-economic market or green market shown in Figure 9 above is the current dominant development model. It is economy and environment friendly, but unfriendly in social terms, which is why economy(B) and environment(C) are in active form and society(a) is in passive form. Figure 9 above says that in the green market only eco-economic choices matter as only the economy and the environment matter. Recently it has been pointed out that the eco-economic development market or green economy market has different structure than the Adam Smith's traditional market or his economy only market(Muñoz 2000), which requires a different way of thinking and acting.

Notice that Adam Smith's invisible hand, the totally uncaring invisible hand no longer works here as the eco-economic market has a partially caring invisible hand. The economic man is now a green economic man. And notice that the passive society(a) is at the center of the eco-economic model or green model in Figure 9 above indicating, like a cancer cell, that the green economy will be under constant social unsustainability for as long as social issues are not internalized.

Moreover, see that Figure 9 above points out the death of the economic man as we know it and the birth the eco-economic man; and therefore, it highlights a new paradigm different than the previous economy only paradigm.

And finally it is important to point out that the eco-economic market or green market is known as the man-made market II because it came after that of Adam Smith(Muñoz 2012); and also it is relevant to stress that moving towards sustainability fixing Adam Smith's model step by step is fine as long as there is time(Muñoz 2015b).

c) In summary:

The eco-economic market or green market represents a partial correction of Adam Smith's traditional market. A full correction of Adam Smith's market leads to the sustainability market. So we have not fully implemented the Brundtland Commission fixing request yet, but paradigm evolution suggests it will get there(Muñoz 2013).

Some food for thoughts

a) *Are current levels of poverty and environmental degradation grounds for model rebuttal? I think yes.*

Comparing poverty and environmental degradation levels locally and globally as they were in 1987 and in 1776 when Adam Smith published "The Wealth of Nations" and if they were worse in 1987 that should give us grounds to refute the traditional market model based on real observations as instead of a friend to social and environmental wealth Adam Smith unleashed an enemy, **what do you think?;**

b) Should we expect the green economic man to be socially friendly? I say no.

Comparing poverty levels locally and globally as they were in 1987 and in 2012 when the eco-economic model or green economic market model was formally accepted and if they were worse in 2012 that should give us grounds on real observations to stress that if current levels of poverty are worse it should not be a surprise the green economic man is socially irresponsible by design as it assumes social externality neutrality, **what do you think?**;

c) Should we expect, albeit in the far future, a transition from eco-economic markets to sustainability markets? I say yes.

Comparing poverty levels locally and globally as they were in 2012 and as they are at a future day and if they are even worse on that future day then that should give us grounds to loudly ask for the internalization of social issues in the eco-economic model; and create that way the conditions for a transition from eco-economic markets to sustainability markets, which can be accomplished simply by making eco-economic development finally socially friendly, **what do you think?**

d) If Adam Smith's traditional market theory is refuted by poverty and environmental observations formally, should we expect a house of cards fall down effect? I think yes.

All theories and models that have taken Adam Smith's theories as their own truth are then weaken if not also refuted when the main card falls, **What do you think?**

Specific conclusions

It was highlighted that Adam Smith had the opportunity to state the theory of sustainability markets in his time, but instead he stated the theory of the traditional market. Whether he missed the opportunity on purpose we will probably never know. What we do know is that living under markets with totally uncaring invisible hands since the industrial revolution has been profitable in economic terms, but painful in social and environmental terms. It was stressed that Adam Smith expectation that self-interest, even the worse type would not lead to chaos in the free market did not materialize and has led us to today's social and environmental chaos.

It was pointed out that when the Brundtland commission said in 1987 that the traditional economic model was not working and it needed to be fixed by making it inclusive and friendly to society and environment, that meant Adam Smith totally uncaring invisible had not worked as it has been socially and environmental unfriendly since the industrial revolution. In other words, the commission critique meant the economic man as we know it was now dead and open the door for a green economic man to be borne.

It was indicated that to fix Adam Smith's model fully and make it socially and environmentally friendly at the same time to meet the Brundtland commission 1987 fixing request required and still requires a 180 degrees shift towards sustainability as only under sustainability the invisible hand needs to be socially and environmentally friendly at the same time. It was emphasized that instead of fully following the Brundtland commission request, we have been partially fixing Adam Smith's model since 1987 by making it environmentally friendly only, what I call eco-economic development, but others call green growth. So the invisible hand in the green market is partially caring and the invisible hand of Adam Smith's traditional market is totally uncaring/ impersonal.

And finally, it was said that we know models evolve whether we like it or not, and evolution means that the time of sustainability markets will come sometime in the future. But it is important to keep in mind, we are no longer living within Adam Smith's traditional market since 1987 so we need to see now beyond the traditional invisible hand.

General conclusion

It was stressed that if Adam Smith did not state the theory of sustainability markets during the industrial revolution period on purpose we will probably never know, but we do know that his markets ruled by totally uncaring invisible hands have brought us economic prosperity together with critical social and environmental problems.

It was pointed out that because of these critical problems in 1987 the Brundtland Commission called for immediately fixing the traditional economic model by making it inclusive and socially and environmentally friendly. It was highlighted that instead of fully fixing Adam Smith's model by making it socially and environmentally friendly at the same time shifting fast towards sustainability decision-makers are only partially fixing it right now by making it environment friendly only.

And finally it was indicated that now we need to think beyond the traditional totally uncaring invisible hands; and think in terms of the partially caring green invisible hands ruling present eco-economic markets; and in terms of the fully caring invisible hands ruling future sustainability markets.

References

Bevilacqua, Vincent M. , 1965. *Adam Smith's Lectures on Rhetoric and Belles Lettres*, Studies in Scottish Literature: Vol. 3: Iss. 1, 41–60

Elliott, Nicholas, 1990. **Introduction**. In: *Adam Smith's Legacy*, P.5, Adam Smith Institute London, London, UK.

Frank, Robert H., 2007. *Trickle-down' theory doesn't hold up*, The Hindu, April 13, India.

Jansen, E., J. Overpeck, K.R. Briffa, J.-C. Duplessy, F. Joos, V. Masson-Delmotte, D. Olago, B. Otto-Btiesner, W.R. Peltier, S. Rahmstorf, R. Ramesh, D. Raynaud, D. Rind, O. Solomina, R. Villalba and D. Zhang, 2007. *Palaeoclimate*. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Macfarlane, Alan, 2013. *Adam Smith and the Making of the Modern World*, May 22, Self-Published Via CreateSpace, North Charleston, SC, USA.

More, Charles, 2000. *Understanding the Industrial Revolution*, Routhledge, London, UK.

Muñoz, Lucio, 2000. [An Overview of Some of the Policy Implications of the Eco-Economic Development Market](#), In: *Environmental Management and Health*, Prof. Walter Leal Filho/PhD(ed), Vol. 11, No. 2, Pp. 157-174, MCB University Press.

Muñoz, Lucio, 2002. [Maximization, Partial Regulation, and System Dominance: Can They Be Drivers of True Sustainability?](#), In: *International Journal on Environmental Management and Health*, Walter Leal Filho, PhD(Ed), Vol. 15, No. 5, Pp. 545-552, MCB University Press, Germany/Sweden.

Muñoz, Lucio, 2009. [How Do Agricultural Development Benefits Actually Spread: Is it the Trickle Down Effect or the Embudo Effect?](#), In: *Environment and Society*, Special Edition, No. 372, January 8, ECOPORTAL, Buenos Aires, Argentina.

Muñoz, Lucio, 2010. [What If Markets Have Always Been Distorted? Would It Then Be a Good Fix to Add Fair Trade Margins to Correct Distorted Agricultural Market Prices?](#), *Journal of Sustainability*, Issue 2, Number 4(Spring), Rio Rancho, New Mexico USA.

Muñoz, Lucio, 2012. [Complex and Man-Made Markets: Are We Currently Approaching Sustainability in a Backward and More Chaotic Way in Terms of Economic Thinking?](#), In: *The Mother Pelican Journal*, Vol. 8, No. 8, August, Ed. Luis Gutierrez, PhD, USA.

Muñoz, Lucio, 2013. [Utilitarianism, Raw Liberalism, Moral Liberalism, and True Sustainability: Basic Paradigm Foundations, Changing Assumptions, and the Evolution of Development Paradigms](#), In: *The Mother Pelican Journal*, Vol. 9, No. 1, January, Ed. Luis Gutierrez, PhD, USA.

Muñoz, Lucio, 2015a. [Beyond Traditional Financial Market Thinking: How An Ideal Financial Market Structure Would Look Like After Ending the Traditional Market Monopoly?](#), In: *Weber Economics & Finance* (ISSN:2449-1662), Vol. 1 (3), Article ID wef_148, 307-316

Muñoz, Lucio, 2015b. [**Towards True Sustainability Step By Step Is Fine While There Is Time: Pointing Out The Unifying Nature Of True Sustainability With The Help Of The True Sustainability Wheel**](#), In: *Weber Economics & Finance* (ISSN:2449-1662), Vol. 1 (3) 2, Article ID wef_150, 321-329.

National Research Council(NRC), 2010. *Understanding Climate's Influence on Human Evolution*, The National Academies Press, Washington, DC, USA.

Olinsky, Ben and Asher Mayerson, 2013. *Trickle-Down Economics and Broken Promises: How Inequality Is Holding Back Our Economy*, Center for American Progress, December 4, Washington, DC, USA.

Popper, Karl, 1965. *Conjectures and Refutations: The Growth of Scientific Knowledge*, Routhledge, London, UK.

Rosten, Leo, 1990. **A Modest Man Named Smith**. In: *Adam Smith's Legacy*, P.8., Adam Smith Institute London, London, UK.

Smith, George H, 2003. *The Other Adam Smith*, Part 2, the Cato Institute, Washington, DC, USA.

The Saylor Foundation(TSF), 2012. [**The Origin of Civilization**](#), Washington, DC, USA.

United Nations Conference on Sustainable Development(UNCSD), 2012a. [**Rio+20 Concludes with Big Package of Commitments for Action and Agreement by World Leaders on Path for a Sustainable Future**](#), Press Release, June 20-22, New York, NY, USA.

United Nations Conference on Sustainable Development(UNCSD), 2012b. [**The Future We Want**](#), June 20-22, New York, NY, USA.

Vatican 2015. *Encyclical Letter Laudato Si' of the Holy Father Francis on Care for Our Common Home*, May 24, Rome, Italy.

Vernier, Richard, 1990. **Adam Smith's Revolution of 1776**. In: *Adam Smith's Legacy*, P.60., Adam Smith Institute London, London, UK.

West, Edwin G., 1990. **Adam Smith's Revolution, Past and Present**. In: *Adam Smith's Legacy*, P.16., Adam Smith Institute London, London, UK.

World Commission on Environment and Development(WECD), 1987. *Our Common Future*. London, Oxford University Press.