

Understanding the Death and Paradigm Shift of Adam Smith's model: Was Going Green the Only Option? If not, Is This Option the Most Sustainable One?.

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Abstract

When the Brundtland Commission called in 1987 for the fixing of the traditional market model of Adam Smith through sustainable development means to make it socially and environmentally responsible and inclusive it set the wheels in motion for paradigm death and shift; and in the 2012 RIO conference the green market or green growth model was chosen as the formal substitute. And this raises the questions, was going green the only option to meet the Brundtland Commission's fixing request? If not, is this option the most sustainable one? Among the goals of this paper is to provide an answer to these two questions.

Keywords: Adam Smith, Karl Marx, Paradigm death, Paradigm shift, Paradigm mergers, Sustainability gaps, Sustainability markets, Traditional market, Economic man, Green economic man, Pure capitalism, Eco-economic market, Green market, Knowledge gap, Red market, Red economic man, Sustainability man, Green growth.

Introduction

a) The world of Adam Smith

In the world of Adam Smith only the economy(B) matters as society(a) and environment(c) are there only for the use of the economic man. This world is summarized in Figure 1 below:

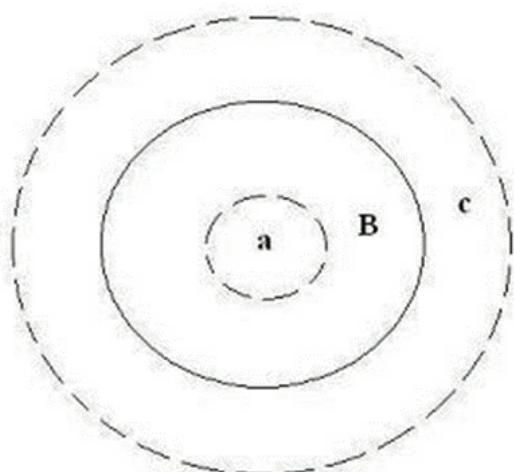


Figure 1 The world of Adam Smith

Figure 1 above says a) that the traditional market of Adam Smith requires only the presence of economic(B) systems in active form as shown by the capital letters in the case of the economy(B) and its continuous line circle; and b) that the model needs the presence of social(a) and environmental(c) systems in passive form at the same time as indicated by the lower case letter in the case of society(a) and environment(c) and their broken line circles.

In other words, under Adam Smith's model, the traditional market, there is a full externality assumption as both society(a) and environment(b) are left out of the model and therefore, economic development(B) can take place outside of social and environmental considerations; and let someone else deal with the cost of those consequences. So in the traditional market independent decision making is needed to ensure full social and environmental exclusion and economic maximization. The structure of Adam Smith's market as a fully exclusive market was recently pointed out analytically and graphically(Muñoz 2015).

b) The two main problems with Adam Smith's model(T)

The details in Figure 1 above can be expressed analytically as follows:

$$T = aBc$$

If we make SSG = a and we make ESG = c, we can rewrite model T in terms of its sustainability gaps

$$T = (SSG)B(ESG)$$

Hence, the two main problems with Adam Smith's model(T) is that it has two sustainability gaps, the social sustainability gap(SSG = a) and the environmental sustainability gap(ESG = c). Because of those sustainability gaps it has been pointed out that perhaps traditional markets have always been distorted(Muñoz 2010); and because of this distortions we are going backwards towards sustainability in terms of economic thinking as we fix these gaps(Muñoz 2012a).

Since the industrial revolution to 1987 we have been expanding the traditional market model and expanding the economy and when doing that we have been also expanding the social sustainability gap constantly accumulating social sustainability deficits as well expanding the environmental sustainability gap constantly accumulated environmental

sustainability deficits in the process. The accumulation of poverty and environmental degradation associated with the working of the traditional market reached a point where it cannot longer be hidden and led to the general feeling that something had to be done. Now there are call for more inclusive growth(WB 2008; OECD 2014) and for development models that are good to people and the environment(Vatican 2015).

c) The 1987 Brundtland Commission critique of Adam Smith's model

When the Brundtland Commission called in 1987(WCED 1987) for the fixing of the traditional market model of Adam Smith through sustainable development means to make it socially and environmentally responsible and inclusive (closing the sustainability gaps highlighted above) it set the wheels in motion for paradigm dynamics that lead to paradigm death and shift under win-win situations(Muñoz 2016); and in 2012 RIO conferences the green market or green growth model was chosen as the formal substitute of the traditional market(UNCSD 2012a; 2012b).

This model assumes social externality neutrality as it is a partnership between the economy and the environment. It has been pointed out that green market sweatshops may be more socially unfriendly than their predecessor, the traditional sweatshop(Muñoz 2012b).

And the coming of the green market raises the questions, was going green the only option to meet the Brundtland Commission's fixing request?. If not, is this option the most sustainable one? Among the goals of this paper is to provide an answer to these two questions.

The goals of this paper

The goals of this paper are:

a) to highlight analytically and graphically the structure of the paradigm shift from the traditional market model to the sustainability market model after full correction;

b) to show analytically and graphically the structure of the paradigm shift from the traditional market model to the socio-economic market model after partial correction type I;

c) to point out analytically and graphically the structure of the paradigm shift from the traditional market model to the eco-economic market model after partial correction type II;

d) to link analytically and graphically the structure of the chosen green market model to the eco-economic market model resulting from partial correction type II;

e) to use the discussion above to show that going green was not the only option available to the mainstream of economic/development thoughts;

f) to use the different market structures derived above to stress that the green market choice is not the most sustainable market structure among the ones that were available.

The methodology

First, the qualitative comparative terminology used in this paper is shared in Table 1. Second, some merging and sustainability gap shift rules are provided. Third, the paradigm shift towards sustainability markets after fully correcting Adam Smith's model and closing its two sustainability gaps is highlighted; Fourth, the paradigm shift towards socio-economic markets after partially correcting Adam Smith's model and closing its social sustainability gaps is stressed;

Fifth, the paradigm shift towards the eco-economic markets after partially correcting Adam Smith's model and closing its environmental sustainability gaps is pointed out; Sixth, the connection between the chosen green market model and the eco-economic market is pointed out. Seventh, the answer to the two questions posted in the title is provided. And finally some food for thoughts and conclusions are given.

The qualitative comparative terminology

Table 1

A = Active social system	a) Passive social system
B = Active economic system	b) Passive economic system
C = Active environmental system	c) Passive environmental system
T = Adam Smith's model	S = Sustainability market
SG = Sustainability gap	SSG = Social sustainability gap
ESG = Environmental sustainability gap	GG = Green growth
EEM = Eco-economic model	GMM = Green market model
EEG = Eco-economic growth	SEM = Socio-economic model
SKG = Sustainability knowledge gap	SEKG = Socio-economic knowledge gap
EEKG = Eco-economic knowledge gap	GMKG = Green market knowledge gap

Paradigm merging and sustainability gap shift rules

If "A" and "B" are dominant characteristics; and "a" and "b" are their dominated or passive counter parts, the following is expected:

a) Merging under dominant-dominant interactions

Under these conditions, dominant or active state prevails as indicated:

$$(AA) \rightarrow A \quad (BB) \rightarrow B \quad (AA)(BB) = (AB)(AB) \rightarrow AB$$

b) Merging under dominated-dominated interactions

Under these conditions, the dominated or passive form prevails as shown:

$$(aa) \rightarrow a \quad (bb) \rightarrow b \quad (aa)(bb) = (ab)(ab) \rightarrow ab$$

c) Merging under dominant-dominated interactions and win-win solutions

Under these conditions, the dominant or active system prevails as the system merge as shown below:

$$(Aa) \rightarrow A \quad (bB) \rightarrow B \quad (Aa)(bB) = (AB)(ab) \rightarrow AB$$

d) Merging under dominant-dominated interactions and no win-win solutions

Under these conditions, the dominated or passive system prevails and the system collapses as shown below:

$$(Aa) \rightarrow a \quad (bB) \rightarrow b \quad (Aa)(bB) = (AB)(ab) \rightarrow ab$$

e) Sustainability gap shift expectations under no win-win solutions

Under these conditions, the sustainability gaps remain opened.

$$SSG = a \rightarrow a \quad ECSG = b \rightarrow b \quad (SSG)(ECSG) = ab \rightarrow ab$$

$$SSG = a \rightarrow a \quad ESG = c \rightarrow c \quad (SSG)(ESG) = ac \rightarrow ac$$

f) Sustainability gap shift expectations under win-win solutions

Under these conditions, the sustainability gaps shift to the dominant counterparts as the sustainability gaps are closed:

$$SSG = a \rightarrow A \quad ECSG = b \rightarrow B \quad (SSG)(ECSG) = ab \rightarrow AB$$

$$SSG = a \rightarrow A \quad ESG = c \rightarrow C \quad (SSG)(ESG) = ac \rightarrow AC$$

Fixing Adam Smith's model

As shown in the introduction the structure of the traditional market model(T) the Brundtland Commission asked us to fix has the following form:

$$T = (SSG)B(ESG)$$

The expression above has the two issues that need to be fixed, the social sustainability gap(SSG) and the environmental sustainability gap(ESG).

And therefore, acting on the Brundtland Commission's request to fix Adam Smith's model(T) and consistent with structure above there are three options for paradigm shift, which are described in detail below one by one both analytically and graphically:

Paradigm death and shift towards sustainability markets

Option One: A full correction of Adam Smith's Model: to correct both the social sustainability gap(SSG) and the environmental sustainability gap(ESG) at the same time

Therefore, if we correct Adam Smith's model fully [T = (SSG)B(ESG)] then we need to close the social sustainability gap(SSG) and environmental sustainability gap(ESG) at the same time; and then the following holds true:

$$\text{Correct (T) fully} = [\text{correct (SSG)}]B[\text{correct(ESG)}]$$

Since under win-win situations and sustainability gap expectations the following is true:

$$\text{Correct}(SSG) = a \rightarrow A \text{ and } \text{correct}(ESG) = c \rightarrow C$$

Therefore:

$$\text{Correct (T) fully} = [A]B[C] = ABC = S = \text{Sustainability}$$

From the above expression we can see that fixing Adam Smith's model(T) fully as requested by the Brundtland Commission would have led us to stating a sustainability market model(S), which is summarized in Figure 2 below:

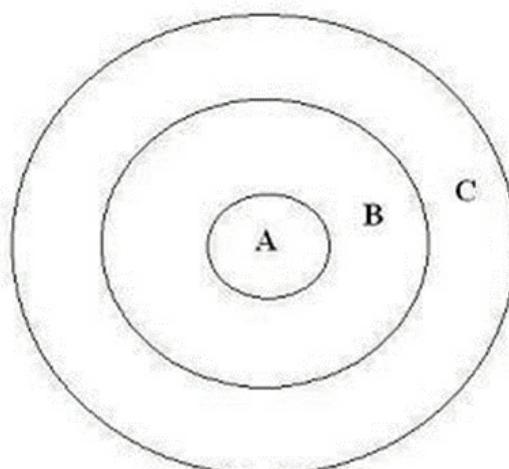


Figure 2: Full correction of Adam Smith's model

Figure 2 above shows that a full correction of Adam Smith's model(T) would have required all components, social(A), economic(B) and environmental(C) to be in dominant or active form at the same time.

Hence under full correction the death of Adam Smith's paradigm(T) would have led: i) to a paradigm shift towards the sustainability market paradigm(S); and ii) to the creation of sustainability market knowledge gap(SKG).

Notice that there are no sustainability gaps in Figure 2 above affecting it as the sustainability market is a socially and environmentally responsible market.

Traditional micro-economic thinking and macro-economic thinking do not work here and to work they need to be updated to reflect a theory of the socially and environmentally responsible firm/consumer and economy and fully conjunctural decision making.

Here the sustainability man replaces the economic man.

Therefore, under win-win situations the paradigm death and shift from the traditional market to the sustainability market would have the following form:

$T = aBc \rightarrow ABC = S$ as $a \rightarrow A$ and $c \rightarrow C$ when all the sustainability gaps are closed.

Paradigm death and shift towards socio-economic markets

The second option: Partial correction type I: To correct the social sustainability gap(SSG) only.

If we correct Adam Smith's model partially [$T = (SSG)B(ESG)$] only to close the social sustainability gaps(SSG), the following holds true

Correct (T) partially type I = correct[(SSG)]B(ESG)

Since under win-win situations and sustainability gap expectations the following is true:

Correct[(SSG)] = $a \rightarrow A$; then:

Correct (T) partially type I = [A]B(ESG)

And therefore,

Correct (T) partially type I = AB(ESG) = SEM = Socio-economic model

From the above we can see that fixing Adam Smith's model(T) partially closing only the social sustainability gap(SSG) and fulfilling partially the Brundtland Commission's fixing request would have led us to stating a socio-economic model(SEM), which is summarized in Figure 3 below:

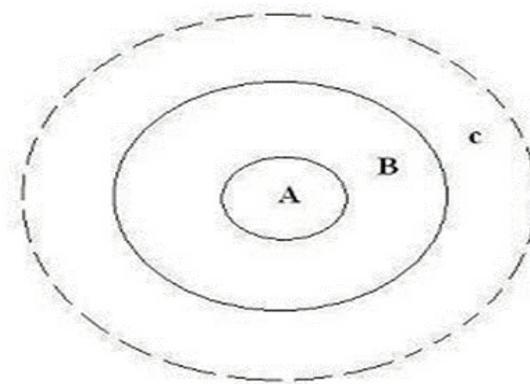


Figure 3 Partial correction type I of Adam Smith's model

Figure 3 above shows that a partial correction type I of Adam Smith's model(T) would have required two components, social(A) and economic(B), to be in dominant or active form. Hence, under partial correction type I the death of Adam Smith's paradigm(T) would have led: i) to a paradigm shift towards the socio-economic paradigm(SEM); and ii) to the creation of a socio-economic knowledge gap(SEKG).

And notice that the model in Figure 3 is affected by an environmental sustainability gap(ESG) as the socio-economic model is a socially friendly capitalist model with an active environmental sustainability gap. Traditional micro-economic thinking and macro-economic thinking do not work here and to work they need to be updated to reflect a theory of the socially responsible firm/consumer and economy and partial conjunctural decision making. Here the socio-economic man or red economic man replaces the economic man.

Therefore, under win-win situations the paradigm death and shift from the traditional market to the socio-economic market would have the following form:

$T = aBc \rightarrow ABC = SEM$ as $a \rightarrow A$ and $c \rightarrow C$ when social sustainability gaps are closed only.

Paradigm death and shift towards Eco-economic markets(EEM)

The third option: Partial correction type II: To correct the environmental sustainability gap(ESG) only.

If we correct Adam Smith's model partially [$T = (SSG)B(ESG)$] only to close the environmental sustainability gaps(ESG), the following holds true

Correct (T) partially type II = (SSG)B[correct(ESG)]

Since under win-win situations and sustainability gap expectations the following is true:

Correct[(ESG)] = $c \rightarrow C$; then:

Correct (T) partially type II = (SSG)B[C]

Correct (T) partially type II = (SSG)BC = EEM = Eco-economic model

From the above we can see that fixing Adam Smith's model(T) partially closing only the environmental sustainability gap(ESG) and fulfilling partially the Brundtland Commission's fixing request would have led us to stating an eco-economic model(EEM), which is summarized in Figure 4 below:

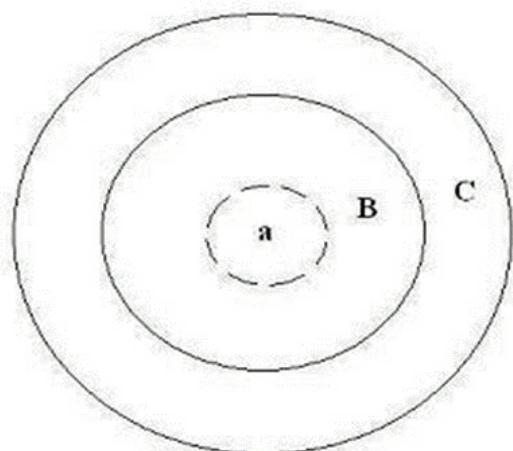


Figure 4 Partial correction type II of Adam Smith's model

Figure 4 above shows that a partial correction type II of Adam Smith's model (T) would require two components, economic (B) and environmental (C) to be in dominant or active form. Hence under partial correction type II the death of Adam Smith's paradigm(T) would have led: i) to a paradigm shift towards the eco-economic paradigm(EEM); and ii) to the creation of an eco-economic knowledge gap(EKG).

Notice that the model in Figure 4 is affected by a social sustainability gap(SSG) as the eco-economic model is an environmentally friendly economy with an active social sustainability gap. Traditional micro-economic thinking and macro-economic thinking do not work here and to work they need to be updated to reflect a theory of the environmentally responsible firm/consumer and economy and partially conjunctural decision making. Here the eco-economic man replaces the economic man.

Therefore, under win-win situations the paradigm death and shift from the traditional market to the eco-economic market would have the following form:

$T = aBc \rightarrow aBC = EEM$ as $a \rightarrow a$ and $c \rightarrow C$ when only environmental sustainability gaps are closed

The birth of the green economy market model(GMM)

The solution given to the Brundtland's commission call to fix the traditional market model(T) of Adam Smith was the green market model (GMM), which was formally recognized in 2012 at the Rio +20 conference as the model replacing the pure economic market as mentioned in the introduction.

The analytical structure of the green market model(GMM) can be stated as follows:

$GMM = aBC = (SSG)BC$

And therefore the following is true:

$GMM = aBC = (SSG)BC = EEM = Correction type II$

Hence, the green market model(GMM) has the structure of an eco-economic model(EEM) resulting from correction type II of the traditional market model(T). Moreover, it can be deducted from the expression above that the green market model(GMM) is a partnership model between the economy(B) and the environment(C).

Figure 5 below summarizes the structure of the green market model(GMM), which has exactly the same structure as the partial correction type II of Adam Smith's model(T), the eco-economic model(EEM) shown in Figure 4 above:

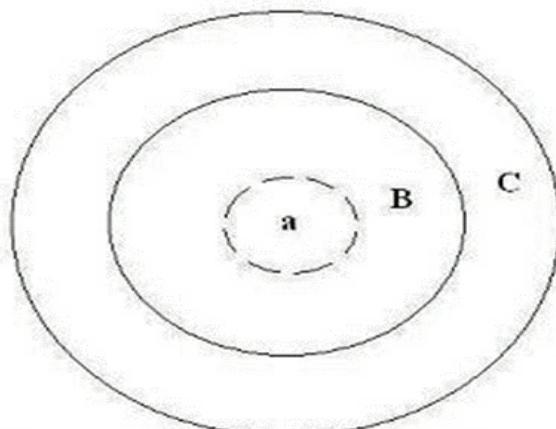


Figure 5 The green market model

The broken line circle around the passive society(a) in Figure 5 above represents the social sustainability gap(SSG) affecting the green market model(GMM).

Hence, the economic man as we know it created by Adam Smith no longer exists today, now we have a green economic man or eco-economic man. Notice that the economic man was totally unfriendly and made rational and independent decisions. But the green economic man is partially friendly and needs to make rational partially conjunctural decisions or co-dependent decisions or win-win decisions as now the model is limited by environmental considerations.

In other words, the green economic man is not making fully independent decisions anymore as the economic man did, but making co-dependent decisions based on mutual self-interest. The economic man did not care about environmental and/or social issues, and therefore he could make selfish independent decisions. The economic man maximizes, the green economic man has not choice, but to partially optimize or to jointly maximize as pure maximization is no longer possible.

Therefore we should expect the green economic man to take decision to jointly maximize the common interest of the

economic-environment partnerships in a cartel type fashion. Joint maximization should be expected to lead to less economic profits than pure economic maximization as now there is no environmental externality neutrality assumption in the green market model(GMM) and those costs need to be now incorporated.

In other words, the Adam Smith's model(T) died and the green market model(GMM) took its place, but not due to confrontation with competing paradigms, but due to internal paradigm dynamics that led to the decision to partially meet the Brundtland Commission's fixing request and close the environmental sustainability gap(ESG) only. And finally it is important to stress again two things: a) that green market model(GMM) is an eco-economic model(EEM); and b) the coming of the green market model(GMM) and the green economic man meant the death of Adam Smith's model and of its economic man.

Was going green the only option?

As shown above fixing Adam Smith's model a la Brundtland Commission had three choices, a full fix or shift towards

sustainability markets, a partial fix type I or shift towards socio-economic markets, and a partial fix type II or a shift towards eco-economic markets, but the mainstream school of economic/ development thought chose a paradigm shift towards green markets.

So the answer to this question is "No", there were other options besides going green.

Was going green the most sustainable option available?

According to Table 2 below: i) the traditional market(T) is the most unstable model, with two sustainability gaps; and the sustainability market is the most stable one, no sustainability gaps, ii) the green market(GMM) and the socio-economic market(SEM) both have one sustainability gap, and iii) the green market(GMM) and the socio-economic market(SEM) are more stable than the traditional market(T), but less stable than the sustainability market(S).

Therefore, the answer to this question is "No", going green was not the most sustainable option.

Comparing paradigm structures

Table 2

Market model	Structure	Gaps	Stability
Traditional	$T = aBc$	2	Fully unstable
Sustainability	$S = ABC$	No	Fully stable
Socio-economic	$SEM = ABc$	1	Partially stable
Eco-economic/Green	$GMM = aBC$	1	Partially stable

Food for thoughts

- There was a trickle-down theory in the economic man's world, is there a green trickle-down assumption or theory under green markets?;
- The economic man works under perfect information, does the green economic man need perfect eco-economic information?;
- To maintain the theory-practice consistency principle, does the shift to green markets also mean a shift towards green micro-economics and green macro-economics?; And
- In the future, will green markets go red most likely because of internal paradigm pressures (paradigm dynamics) or external pressures (paradigm clash)?

Conclusions

First, it was highlighted that there were three choices to fix Adam Smith's traditional market model based on its structure, a full fix and shift towards the sustainability market, a partial fix type I and shift towards the socio-economic market, and a partial fix type II and shift towards

the eco-economic market. Second, it was indicated that the green market is an eco-economic market, a partial fix type II as only the environmental sustainability gap is closed;

Third, based on the above it was pointed out that going green was not the only option available. And fourth, it was stressed based on comparing market structures that going green was not the most sustainable fix among those available.

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