LIFE AS THE HEART OF ECONOMY

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An Economy Where Life is the Heart at a glance

What is it?

An economy focused on that which humans needs to live. Lives of humans, animals and nature are the focus of attention.

Why?

The present economy generates huge wealth but also causes injustice and environmental damage. Despite many efforts to curb these side effects, injustice and pollution remain. With current economic thinking, it appears impossible to tackle these problems.

The six characteristics of an economy where life is the heart

1. Justice. o Fair treatment of humans and animals throughout the complete production chain.

2. Focus on needs. o Buy what you need, manufacture and sell what the customer needs.

3. Consider all phases. o From purchase to sale, from raw materials to waste.

4. Knowledge and awareness. o Know what you buy, know what you manufacture, know what you sell.

5. Energy saving and efficiency. o Use as little energy as possible.

6. Usage heritage. o Manufacturers take responsibility for side effects of production. Manufacturers and customers take responsibility for the side effects of the using of products.

Economy where Life is the Heart

1. Introduction

Increasingly, the consequences of a materialistic oriented economy come to the surface.[1] When one case of environmental damage has just been brought under control, another one appears. Yesterday, a social problem has only been solved with great efforts; today, a new misuse comes to light; tomorrow, the secret of today will be revealed. Energy use is sky-high,[2] the aftertaste is bitter[3]. At many locations, soil, water and air are poisoned while long-term effects are largely unknown.[4] To try to curb the side effects of a materialistic economy, politicians present different solutions, some efficient, some less efficient. The popular synonym of renewable energy, 'green energy', sometimes conceals a dirty alternative meaning. A notable example is when so called rare-earth metals are used in wind turbines and electric vehicles, since radioactive waste is a by-product of rare-earth metals.[5] Even without by-producing radioactive waste, sourcing renewable energy always has a negative impact, for example by disturbing people or killing birds or fish.[6] High energy use will always have a nasty downside.

Many solutions presented are thus not sufficient.

As long as the economy is oriented at increasingly gathering more goods, this economy keeps destroying people, animals and nature. Because: this accumulation of goods never stops. It only stops when the snake starts eating its own tail. Elevating 'growth' as the god of the economy implies sacrificing other principles at its altar. Only when 'growth' is dethroned, when 'more' is argued against and when calculations are analysed from the viewpoint of the real world, only then, room for an alternative economy can emerge.

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[1] http://www.fao.org/state-of-forests/en/; https://labs.theguardian.com/unicef-child-labour/; https://www.clubofrome.org/

[2] https://www.iea.org; https://ourworldindata.org/energy

[3] https://waqi.info/; https://worldoceanreview.com/en/wor-1/pollution/oil/; Jacoby, M., *As nuclear waste piles up, scientists seek the best long-term storage solutions* in: Chemical and Engineering News, Vol. 98, Iss. 12, March 30, 2020.

[4] PFASs: http://chm.pops.int;https://www.env-health.org/the-forever-chemicals-that-are-harming-our-health-pfas/; air pollution: https://ourworldindata.org/air-pollution; water pollution: http://www.unesco.org/new/en/natural-sciences/environment/water/wwap/facts-and-figures/all-facts-wwdr3/fact-15-water-pollution/;http://www.fao.org/land-water/water/en/

[5] https://www.dw.com/en/toxic-and-radioactive-the-damage-from-mining-rare-elements/a-57148185

[6] Burrows, L., *The down side to wind power* in: The Harvard Gazette, October 4, 2018.

2. Life as the heart of economy

In contrast with an economy where material possessions form the core, I propose an economy where life is the heart. Life as the heart of the economy means firstly, an economy focused on that which the central actor of every economy, the human, needs to live. Secondly, life as the heart of the economy means being focused on seeking the best for other people, animals and nature in the production chain, taking into account the first meaning.

One example: it might be better for nature to leave a part of the woods untouched instead of clearing it for agricultural use. However, if clearing provides for the needs of the human so he[7] can live, it is part of an economy centred on life. The interests of the subject of economy, the human, prevail over the interests of nature. At the same time, the human has to take into account his impact on nature. Food loss should be avoided to minimise the agricultural area needed. Soil optimisation, crop and soil knowledge and, when possible, giving back land to the forest, are examples of seeking the best for nature.
Another example: the killing of animals so humans may live, is also part of a life-focused economy. Here, too, the interests of the human prevails. However, when still alive, the animal should be treated with great respect, especially so, since the animal offers its life for the human. Natural food, space for natural behaviour and understanding attention are part of an economy where life is the heart.

In an economy where life is the heart every human being is equal.[8] Therefore, the needs of one human can never prevail over the needs of another human. The interests of the human prevail over the interests of animals and nature. At the same time, humans have to act, as much as possible, in the interests of animals and nature.

Is a life-focused economy radically different from the current economy? Yes and no. No, not in form. When life is the heart of economy, it still is a market economy with capital. Yes, because the focus is radically different. Goods and manufacturing are means to live, not purely target driven. Profit is a means to live, not an end in itself. Capital is focused on the community, not on self-interest. Market forces ought to be an instrument to fulfil needs, not a motivation to pressure people into buying things they can scarcely afford. Life, not growth, is the heart.[9]

[7] For stylistic reasons, I use male pronouns in this text, which are meant to encompass all genders and gender identities.
[8] *Universal Declaration of Human Rights*, art. 1.
[9] Although growth is part of life, unlimited or unchecked growth is often deadly for organisms. Growth should always serve life and never be a goal in itself.

Citizens, companies and the government each have a responsibility. Citizens can steer demand by their transactions and consequently influence supply. Companies decide how, what and where is manufactured. The role of the government is serving society.[10] This means, supporting people to live, on top of the classic provision of safety.

3. The characteristics of an economy where life is the heart

I distinguish six characteristics in an economy where life is the heart: justice, a focus on the fulfilment of needs, a way of thinking and acting which considers the entirety, knowledge and awareness, energy saving and efficiency and lastly the usage heritage.

3.1 Justice

Life requires justice. Injustice harms life, justice is life. When life is the heart of economy, everyone who is part of the production chain is paid fairly. Human rights are observed.[11] Working conditions comply with health and safety standards, even in areas with poor governmental oversight. Local or indigenous people are not expelled from their land, not by the producer, nor by a supplier. Whistle-blowers are listened to. Wrongdoings are investigated. Justice is based on intervention, not inaction.

Justice surpasses compliance. It requires a mentality, the will, to defend the weak and the courage to withstand the powerful when needed. Conscience is valued - no manipulation, no ego trips. Apologies, when needed, ennoble him who makes a mistake.

Citizens can support justice by buying products that are produced in a way that respects humans, animals and the environment.[12] This costs money. Free and cheap are generally not trademarks of fair production. I noted before that in an economy where life is the heart, capital serves the community. Money, as a small daily form of capital, is thus spent in a life-focused economy with an eye to the interests of the buyer as well as the interests of the community.

[10] Compare also *Plakkaat van Verlatinghe*.
[11] *Universal Declaration of Human Rights*, on the European continent additionally: *European Convention on Human Rights*.
[12] For instance: Fairtrade certified products. Moreover, locally and regionally produced products often offer more transparency on labour and production conditions and contribute to a healthy local and regional economy.

Companies can support justice by manufacturing in a way that respect humans, animals and nature.[13]

Governments serve justice by creating a level playing field,[14] battling corruption[15] and correcting citizens and companies that cause harm to others.

Of notable importance is the will of companies and governments to hear whistle-blowers. Whistle-blowers are people driven by their conscience, usually considering the interests of, or a part of, society. Although the truth can be hard, it must be heard, since justice can only be executed if it is based on truth.

3.2 Fulfilment of needs

In an economy where life is the heart, production is aimed at the fulfilment of needs. With needs, I mean: that which one really needs to live and that which substantially enhances the quality of life. What one really needs to live, is basically the same for everyone: the well-known 'food, shelter, clothing'. I consider a minimum level of quality of life, like health, as a need for everyone as well. Needs that go beyond these basics, are quickly becoming personal.[16] Different people have different needs and needs are also dependant on the profession and other activities one is engaged in. Therefore, it is the liberty of the individual to know one's needs and to seek fulfilment of those needs. Knowing one's needs requires introspection and reflection. In a life-focused economy, introspection and reflection are not just tasks for the individual but also for society. Citizens, companies and governments have to respect the autonomy of human beings and support the individual with his knowing and fulfilment of needs.

For citizens, the focus on needs can be divided into two questions: "What do I really need?" and "What do I really want?" The second question could also be phrased more elaborately: "Does this product give me the feeling my life is enriched?"

To illustrate the first question of "What do I really need?": few people will really want an alarm clock. However, for most people, an alarm clock is indispensable. Buying an

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[13] *UN Guiding Principles on Business and Human Rights*, *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas* and *Guidelines for Multinational Enterprises*; sourcing raw materials or producing in an environmentally and socially responsible way, producing more locally and regionally or own or closely monitor worldwide production chains. In a growing number of industries, voluntary agreements are becoming the norm. See chapter *8 Literature* for more sources.

[14] Important examples are: *California Transparency in Supply Chains Act*; *UK Modern Slavery Act 2015*; *USA Section 1502 of the Dodd Frank Act*; *EU Conflict Minerals Regulation*.

[15] https://www.transparency.org/en/

[16] See also: Guillen-Royo M., *Human Needs* in: Michalos A. C. (eds), Encyclopedia of Quality of Life and Well-Being Research, Springer, Dordrecht, 2014.

alarm clock (and perhaps a second one plus another in reserve) is therefore aimed at the fulfilment of needs.
To illustrate the question "What do I really want?": buying decorative objects, including works of art, is not really necessary for anyone. Yet it can be something people really want to have and what truly enhances the quality of life. If this is the case, buying decoration and art is the fulfilment of a need. However, if someone is not interested in a particular item or does not feel a connection, buying that item does not add value to the life of the potential buyer.

For companies, the same questions apply, addressing the needs of the buyer and the company itself. Firstly, regarding the buyer: "What does the buyer really need?" and "What does the buyer really want?" Again, the more elaborate phrasing of the second question can also be helpful: "Does the buyer has the feeling that a particular product truly enriches life?"
It is not up to companies to decide for the potential buyer what he really needs or wants. In a life-focused economy, companies do not manipulate citizens. To the contrary, in a life-focused economy, companies support the understanding of the potential buyer of his needs and the fulfilment thereof. With this mindset, it is likely in the interest of companies to invest in long-term buyer-seller relationships. Planned obsolescence is not a strategy that is part of an economy where life is the heart. This might lead some companies or industries to change their business model.
For companies themselves, the question about needs applies as well: "What does this company really need?" Assets can be acquired, used and sold again with this question in mind. Also part of this question is: "What do the employees of this company need?" In an economy where life is the heart, needs of employees are equally important.

Profit and the related efficiency are goals every healthy business strives for. However, achieving these goals is not always easy. For example, when the urge for efficiency has detrimental effects on the work environment, absenteeism and resignations can increase, ultimately impacting the much sought-after efficiency and profit.[17]

The earlier mentioned introspection and reflection are also essential for companies. A company's self-awareness is required. Efficiency and care for employees only exist when they are reality. Real profit must not be hidden or distorted.[18]

The task of governments is to consolidate life as the heart of economy. Society has to be protected against any possible manipulative influences of companies.[19]

[17] See also: https://firstforsustainability.org/risk-management/understanding-environmental-and-social-risk/environmental-and-social-issues/labor-and-working-conditions/
[18] https://www.bbc.com/news/world-57368247
[19] Example: EU ban on tobacco advertising, https://ec.europa.eu/health/tobacco/advertising_en

3.3 Entirety

An economy where life is the heart includes everything. Like an organism which consists of multiple connected parts, being one unity, in an economy where life is the heart, oversight is necessary for all parts of the production chain. Moreover, in an economy where life is the heart, the complexity of the entirety is considered, like all parts of an organism cohere in a complex way. This complexity forms a great challenge in a life-focused economy, especially for companies. Design, production, extraction of resources, employees, sales and product lifecycle are a unity in an economy where life is the heart. Proper exchange of information to link these phases, an elaborate plan and a stable and decisive leadership are necessary to achieve a durable life-focused production. Citizens, companies and governments work together in an economy where life is the heart.[20]

The role of citizens with regard to this focus on the entirety, consists of four actions: only buy to fulfil needs; pay for life-focused products; use the product as long as possible; sell on or properly dispose of the product when it is no longer needed or wanted. The proper disposal of a product is dependant on the product and the location: nutshells might be good for the soil of your garden, on the road they might be considered litter; on the other hand, a plastic tray is only disposed of properly if it is put in a bin. Ideally, all plastics would be biodegradable.

The role of companies is, as mentioned, considerably extensive and complex. Not only has the complete production process to be life-focused, the product itself has also to be focused on life. In an economy where life is the heart, the plastic tray from the example is not only manufactured showing respect for life, the tray itself is also the responsibility of the manufacturer, shared with the buyer. Manufacturers who take full responsibility are a central part of an economy where life is the heart. As such, responsible companies can also be considered drivers of an economy where life is the heart. Because of all the factors and actors in a production process, plus the nature of the product itself, manufacturers, even more when they are united, have an especially great influence on the life-focus of an economy.

In this entirety, governments have a unique role by connecting industry and citizens. This can consist of, amongst other roles, the overseeing of rubbish and recycling collection, the informing of citizens, the facilitating of consultation meetings, the addressing of miscommunications among industries, and the enacting of clear laws and rules.

[20] For example, the voluntary agreements mentioned in reference 8.

3.4 Knowledge and self-awareness

Both knowledge and self-awareness are a type of 'knowing'. Therefore, in an economy where life is the heart, free access to information is secured. This results in a free press, access to internet, open debate, absence of censorship and education that stimulates pupils and students to trust others as well as always staying critical. An economy where life is the heart, depends on both of these facets. Because of the complexity, extensiveness and impact of production, collaboration is necessary to stay focused on life. Unfortunately, some individuals show no respect for life or are indifferent. There can be no collaboration with such individuals to build an economy where life is the heart. Sometimes, some individuals even have to be excluded from certain economic processes to prevent them from destroying life. In the most extreme cases, criminal law procedures can be instigated. However, harm will then already have been done. It is better to recognise risks in people's motives at an early stage and prevent them from doing harm.

Supplying raw materials used for making poison gas to a doubtful regime is a good example. Not everyone in the production chain can have knowledge about it but when in doubt, it is better in such a case not to do business and inform authorities. Critical thinking can help to ask relevant questions when there is doubt about the motives of a person or to investigate the history and connections of this person.

When citizens want to buy with more self-awareness, the two questions I explored already above *(3.2 Fulfilment of needs)* could be of help. Acquiring knowledge is not difficult, especially with the use of internet. Acquiring relevant knowledge, however, is not always easy. By relevant, I mean: suitable for the individual concerned at the right time.
I am of the opinion that the average citizen cannot be expected to know or to be able to find all relevant knowledge. There is simply too much knowledge available to have such an expectation. Therefore, it is all the more important that companies and governments, having specialists' information, are trustworthy and share this specialists' information with citizens. Of course, with specialists' information I do not mean trade secrets, but I do mean, for instance, possible risks that can arise from using a certain product.

'Knowing' for companies has, therefore, a double meaning: know what the company does and what its impact is, and share specialists' information with citizens and governments. It is advisable for companies to employ or hire inquisitive people who think critically. Knowledge can emerge 'spontaneously' but is often discovered through

effort. This not only requires research skills but also the right mentality. To stay focused on life, inconvenient knowledge also needs to be assessed.[21]
The leadership of a company needs the will to receive such knowledge *and* to use it to act decisively. Inconvenient knowledge must sometimes be shared with citizens and the government. Courage is needed to do that, yet it is part of an economy where life is the heart.

When companies want to buy with more self-awareness, the questions I explained under *3.2 Fulfilment of needs*, can be used.[22]

Governments, like companies, need to have expertise and share relevant knowledge with citizens. It is also advisable for governments to involve people who are inquisitive and who think critically.

3.5 Energy saving and energy efficiency

Because the use of resources and energy always has an impact on nature and therefore also on people, it is important to minimise that use. The human can take and use what he needs to live while at the same time should take into account the effects on his own life, the lives of other people, livestock – the whole of nature. The idea of energy saving and energy efficiency can also be applied to the energy of people, as I will be exploring below. For all these reasons, in an economy where life is the heart, saving of energy and energy efficiency are never a goal but a means to live.

Citizens can save a lot of energy (and money) by only buying to fulfil needs, by using products as long as possible or selling them on. Often, handling products with care can prolong product lifetime. Using more human power instead of machines, is another energy saving option. Travelling by car and plane in particular, means using massive amounts of energy, irrespective of the energy source. Only using these means of travelling when necessary to fulfil a need, can greatly contribute to reduction of energy use. Using the car to pick up some scones at the local bakery when it is within walking distance, is inefficient use of energy.[23]
Measures to improve energy efficiency of homes must contribute to quality of life. When measures can reduce quality of life, alternative suitable solutions must be searched for - or innovated.[24]

[21] For instance: when a product appears to be unsafe for users, it is better to inform citizens and governmental bodies immediately than to try to cover up this finding. *U.S. v. Tanaka et al.*, https://www.justice.gov/criminal-vns/case/takata-airbag-inflator-matter
[22] "What does this company really need?" and "What do the employees of this company need?"
[23] Although 'walking distance' is also very personal.
[24] For example: quieter heat pumps, https://www.quietmark.com/news/how-to-install-a-heat-pump-at-home

Some examples of energy saving and energy efficiency: pay extra for locally produced products, invest in appliances that are more energy-efficient. When a purchase is needed or wanted, buy quality - of course, only when the budget can accommodate it. Someone who struggles to make ends meet, cannot be expected to pay a higher price for good products. An allowance might be needed to support low-income households to buy necessities.

Energy saving and efficiency in the case of companies means, to begin with, only producing and buying what is needed. This does not preclude producing and holding of stock. Energy saving and energy efficiency further means that products have a long as possible lifecycle. As mentioned before, planned obsolescence is not part of an economy where life is the heart. More attention can be given to the possibility to repair appliances and devices so as to use them longer. Furthermore, it is important to produce locally as much as possible; do not get from afar what is also available nearby. More energy can be saved by letting employees work more often at coworking places closer to their homes, or work from home if that is preferred. Modern technology offers great opportunities for remote work.[25] Less commuting and avoidance of traffic jams can contribute to higher physical and mental energy levels.
When it comes to production, it is important that companies deliver quality. This may sound obvious, yet it is not. In a race to ever lower prices, there is always a loss of quality. By this practice, a highly competitive market can hinder the optimisation of energy. In such a case, it is advisable that companies consider a more co-operatively styled strategy, such as a merger or joint venture, in order to remedy this overly competitive situation.
It is important to search for production processes that need as little energy as possible. It is of equal importance that energy using products, such as domestic appliances, are as efficient as possible.
Capital goods may be purchased more efficiently if companies stay focused on needs. Efficiency is increased when companies use capital goods for as long as possible. Obviously, prolonged use of capital goods has to suit the business needs of a company. A well-built desk can be used for many years while machinery sometimes needs to be replaced to meet market demand. It might be an economical option to upgrade a current production line instead of an entire replacement or to resell it to a company that does not need, or feels the need, to use the latest technology. For example, an ice-cream manufacturer start-up might want to buy a used production line instead of a new one.

The task of governments is to coordinate and implement measures to guarantee energy saving and energy efficiency in society. Additionally, a lot above under the

[25] As proven by the worldwide work-at-home response to COVID-19.

heading *3.3 Entirety* applies: governments can facilitate consultative meetings among several interest groups and stakeholders, inform, redress miscommunications and detect room for improvements. My above ideas about the internal organisation of businesses equally applies to the internal organisation of governments. Buying with a focus on needs, together with using capital goods for as long as possible, reduce the total amount of energy required. Smart working can also save energy, including employees' physical and mental energy. Bureaucracy has to be life-focused and thus energy efficient. Bureaucracy that does not serve life is a huge waste of energy. Moreover, governments can create a level playing field by taxing transport more or differently and stimulate companies to cluster production.

3.6 Usage heritage

Of great importance is attention to what I call the *usage heritage* - that which remains after production and usage of a product. The usage heritage of a production process and a product is to be limited as much as possible and preferably never irreversible. In an economy where life is the heart, no poison is discharged or dumped. Users are accurately informed about possible risks that can arise from using a certain product. Manufacturers have, together with the user, shared responsibility for products when its lifetime ends. New technologies, chemicals and other materials are not put on the market when there are serious doubts about the toxicity for humans and the environment. Concealing of toxicity of products can result in criminal liability. The usage heritage is an integral part of all the characteristics of an economy where life is the heart: *justice* does not stop at sale, the usage heritage plays a role in the question what a person or organisation really *needs*, *knowledge* contributes to insight of the usage heritage, the usage heritage influences the *energy efficiency* of a product, all of this gives a complete picture. It has to be clear what the usage heritage of a product is and whether that usage heritage is acceptable. Debate and exchange of knowledge are therefore needed.

The extraction of resources in an opencast mine causes, by its nature, a permanent scar to the landscape. The usage heritage can at best be reduced to the minimum by using as few resources as possible and when mining finishes, by mine reclamation, rehabilitation or reuse for recreational purposes. Still, the usage heritage of such a mine is never irreversible, neither is the usage heritage of produced products or generated energy thereof.

Citizens can take the usage heritage into consideration when making a decision whether or not to buy a product. Moreover, citizens can influence the usage heritage

of a product through proper maintenance and proper disposal at the end of the product's lifetime.

Companies have to take responsibility for the usage heritage of their products. Taking responsibility is a form of justice; not taking responsibility is injustice and could result in liability.[26] The usage heritage has to be researched before products are put on the market. In a life-focused economy, companies do not only comply with regulations when a product or the production process creates harmful effects, they also actively enter into conversation with specialists and potential buyers. The aim is, preferably, to eliminate harmful effects; when that is not possible, to reduce it. In the latter case, it may be wise to consider a halt in production and sale of a product, or to only produce and sell when it is deemed necessary. The usage heritage already comes into existence at the extraction of resources. Also at this stage, taking responsibility is justice and not taking responsibility is injustice.[27] In an economy where life is the heart, child labour, unsafe working conditions, discrimination, unsafe storage of radioactive waste, unnecessary animal suffering and unnecessary effects on nature are *not* part of the usage heritage.

To control usage heritages, governments need to take legal action. The aforementioned examples of irresponsibilities are each a serious violation of respect for life, human rights, other international treaties and also often of local regulations. Poor local governmental oversight over crime scenes should not hinder other governments from applying legal consequences to reprehensible actions of companies. I am of the opinion that where the money flows, responsibility and liability follow. Significant fines are needed to give unrighteous profit back to exploited labourers. Grave illegalities have to result in criminal liability. Besides taking legal actions, national governments have the task of cooperating internationally to combat cross-border wrongdoings. It could be an option to support a local government who oversees a location where multiple incidents are reportedly taking place. Confronting a certain company with alleged wrongdoings might suffice to change its behaviour. Working together with companies to find solutions can also be part of a strategy to make the usage heritage of production and products life-focused.

[26] Compare https://www.business-humanrights.org/en/latest-news/dupont-lawsuits-re-pfoa-pollution-in-usa/
[27] https://industryeurope.com/sectors/consumer-goods/chocolate-companies-face-us-lawsuit-over-child-slavery-in-africa/; http://opiniojuris.org/2020/01/13/the-mighty-apple-google-tesla-dell-and-microsoft-in-the-dock-a-look-at-the-child-labour-lawsuit/

4 Implications

An economy where life is the heart has to be created; it does not come into existence spontaneously. Every step that is life-focused, is a step forward. No journey is completed at the start and every step during the journey counts. So it is with an economy where life is the heart. This economy emphasises the human over production.

4.1 Focus on life satisfaction

In an economy where life is the heart, true wealth is not determined by possessions but by life satisfaction. Goods are to support. That does not mean goods are unimportant; on the contrary: goods produced and bought in a life-focused economy are wanted.

4.2 Growing service sector, less manufacturing

When there is greater emphasis on life satisfaction and less on possessions, it is likely that the manufacturing industry shrinks and the service sector grows. Nevertheless, because of a higher demand for products with a good design - functional and with a certain form of beauty - a robust market remains for the manufacturing industry. Efficient production reduces transport. Well-designed products are worth a repair. Artisanal products might also fulfil needs of buyers.

4.3 Fair prices

In an economy where life is the heart, products are sold at a fair price, not at rock-bottom prices.

4.4 No waste of food

Livestock is only slaughtered when animals are actually eaten: there is no place for overproduction of meat in a life-focused economy, neither for food loss or food waste. Food is not ‘dumped’.

4.5 Quality products with emotional value

Optimisation is part of an economy where life is the heart. This optimisation is life-focused. Not only production but also the quality and emotional value of a product are

optimised. Longer production processes might be the result. More time will be spent on buying and selling with awareness.

4.6 Beauty in architecture

In an economy where life is the heart, buildings - including industrial buildings - are allowed to look good and be visually fulfilling. Beauty may be expressed through simplicity and functionality.

5 Transition

The transition from a materialistic oriented to a life-focused economy is already an ongoing process. Justice in the economy has been sought, fought for and found, at least since the abolitionists pleaded against slavery. Nowadays, groups of people continue fighting against modern slavery. Energy saving and efficiency are being addressed because of climate change. The usage heritage of production and products has the attention of the whole world, since the discovery of ozone layer depletion.

All these developments have been triggered by the urgency to protect life. An economy where life is the heart adds to these developments the conscious focus on the fulfilment of needs, instead of a consumer society characterised by commercial drivers.

The focus shifts from protection of life against harmful consequences of the economy, to life as the basis of the economy.

During the transition from a materialistic economy to an economy where life is the heart, some changes may be required.

5.1 Buying behaviour

The main challenge for a further transition from a materialistic to a life-focused economy is the will to change buying behaviour and adapt production.

5.2 Taxes

Governments might need to change tax systems. Multiple modern power structures are built upon a consumer society which makes buying and economic growth necessary for the continuation of power. A broader debate about this is welcome.

5.3 Stable economies

A stable economy is to be preferred over a severe boom and bust cycle. Growth is fine, but should not be the main focus.

5.4 Longer lifecycles

Companies will need to develop products with a long lifetime.[28]

5.5 Fair prices for raw materials

To enable workers to truly sustain themselves and their families, prices for raw materials, like gold and other metals, should become fairer.[29]

5.6 Local production

More local production can help in saving energy and in producing more efficiently but can also result in a higher base price.

5.7 Industry initiatives

Companies can, on their own initiative, collectively exclude particularly harmful substances from production (processes). The harmfulness of a substance should be determined by the scientific community, not by industries. Companies can, also on their own initiative, take collective responsibility for products when disposed of by consumers. These industry-wide collective responsibilities require the life-focus that is characteristic of an economy where life is the heart.

5.8 No impulse-buying

Another change that is needed is a shift from influencing the customer, to customer-loyalty. Businesses need customers but potential customers can be approached with more respect to the dignity of the individual. Not "What do I want to sell to this customer?" but "What does this customer need?"

[28] https://www.greenbiz.com/article/right-repair-way

[29] The market of raw materials is extensive and labour issues are very complicated. I only briefly mention the subject of underpayment here. For more in-depth information, I refer to the sources listed under chapter *8 Bibliography*.

5.9 Customers

Ultimately, the buying behaviour of customers determines whether companies can invest in responsible production of high-quality products. Although a single customer exerts less economic influence than businesses, large groups of customers have an influence that can make a difference, especially if customers unite. It is powerful when individual customers realise that unity really is strength.

Further expansion of an economy where life is the heart does not depend on a few or 'the other'. Everyone, even if economic influence exerted is small, can choose for an economy where life is the heart. Every step forward counts, every decision causes an effect.

6 Recommendations

Based on the theory of an economy where life is the heart, I have listed some recommendations.

6.1 Rule of Law

In paragraph *3.1 Justice*, I already hinted at the importance of the Rule of Law in an economy where life is the heart. The Rule of Law is defined by the United Nations as follows:

> *[T]he rule of law is a principle of governance in which all persons, institutions and entities, public and private, including the State itself, are accountable to laws that are publicly promulgated, equally enforced and independently adjudicated, and which are consistent with international human rights norms and standards. It requires measures to ensure adherence to the principles of supremacy of the law, equality before the law, accountability to the law, fairness in the application of the law, separation of powers, participation in decision-making, legal certainty, avoidance of arbitrariness, and procedural and legal transparency.*[30]

It is not really progress if workers are fairly paid and work in a safe environment, but are frequently robbed, have to pay bribes on a regular basis or need to pay arbitrary taxes. Therefore, to support an economy where life is the heart, I recommend that governments implement and protect the Rule of Law. When governments are, or seem

[30] https://www.un.org/ruleoflaw/what-is-the-rule-of-law/

to be, reluctant to respect the Rule of Law, civil rights organisations can request, or peacefully pressure, the government to strengthen the Rule of Law.

6.2 Energy transition

6.2.1 Invest in sustainable energy research

Building upon paragraph *3.5 Energy saving and energy efficiency*, I recommend governments should heavily invest in research into true sustainable energy that can generate high-output power, for example research into so-called blue energy and tidal energy.[31]

6.2.2 Nuclear energy

With *true sustainability* I do not mean nuclear energy. With increasing concerns over global warming, nuclear energy is being presented as a 'clean solution'. Nuclear energy is neither clean nor a solution – as long as nuclear waste remains toxic for up to 10,000 years, nuclear energy equally creates problems which are out of our control. The question whether nuclear waste should be considered less problematic than global warming, can only be answered in the distant future. Moreover, the risk of accidents occurring is small, but when such accident happens, the consequences are likely devastating and long-lasting.

However, if countries still want to make use of nuclear energy, I suggest these countries should invest heavily in research into a truly sustainable solution for nuclear waste. Long-term underground storage facilities should remain accessible. Possible leakages should be detectable and reparable earlier on and when the ultimate solution will be found, the waste should be relatively easy to transport.

6.2.3 Nuclear waste from rare-earth metals

Nuclear waste, as the result of extraction of rare-earth metals, should be properly stored. Rare-earth metals should be taxed so the storage of this waste can be funded.

6.2.4 Bigger planes, less flying

Plane flights should be fewer, with bigger planes and more efficiently managed flights.

[31] https://redstack.nl/en/; https://actionrenewables.co.uk/news-events/post.php?s=everything-you-need-to-know-about-tidal-energy

6.2.5 No wood as biomass energy

Wood should not be promoted as sustainable biomass energy. It is often not CO2 neutral.[32]

6.3 Legally binding sustainability criteria

Sustainability claims can sometimes be misleading.[33] Governments should not let the market determine what is sustainable but should develop legally binding sustainability criteria – and enforce them.

6.4 Complete phase-out of per- and polyfluoroalkyl substances (PFASs)

Governments should mandate a complete phase-out of per- and polyfluoroalkyl substances. The chemical industry should develop a truly safe alternative for these substances.

6.5 Protected areas for ancestral species of livestock and flora

In addition to protecting endangered species in general, protected areas should be designated for ancestral species of livestock – if these ancestral species are still alive. Similarly, uncultivated zones for flora should be designated. In these areas, let nature do its work so as to ensure pools of species with strong genes. Breeding gives desirable results from a human perspective but often depletes or degenerates the genetic qualities of the breeds, affecting the resistance to diseases. It is advisable if clusters of ancestral species are being 'bred' by nature to remain a pool of high quality genes. New breeds can be bred from these ancestral pools if domesticated livestock or flora has become too inbred. Feral species, like the mustangs in North America, might be a good alternative if the ancestral species has become completely domesticated.

6.6 Waiving of international debts after 30 years

International debts of governments should be waived after 30 years, or earlier, if it becomes clear those debts bring, or can bring, a particular country into crisis or if it becomes clear the debts hinder a particular country to recover financially. In these cases, interest should be waived after 20 years, or earlier, to prevent the debts to be overly inflated only because of unpaid interest.

[32] https://physicsworld.com/a/biomass-energy-green-or-dirty/
[33] https://fsc-watch.com/

7 Conclusion

The current materialistic and growth-oriented economy increasingly reveals severe limitations. A growing world population, informed and vocal citizens and multiple worldwide environmental problems give reason to reconsider the allocation of goods and other economic theories and concepts.

The theory about an economy where life is the heart introduces a progressive approach to economics, incorporating the reality of current world market economies. In this theory, life is the heart of economy: primarily the life of the human, followed by the life of animals and nature. When the focus of buyers, producers and governments shifts from growth and possession to life-focused purchases and production, an economy can be realised that provides for the fulfilment of needs of society in an ethical and efficient way.

To realise an economy where life is the heart, concerted action is needed. Step by step, a just and sustainable economy can thus be built, where citizens, companies and governments together take responsibility for each other, animals and nature. Citizens, companies and governments each have their own role.

The theory about an economy where life is the heart presents a hopeful future and provides a framework for policy-making.

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Factor 10 Institute http://www.factor10-institute.org/index.html
FIRST for Sustainability https://firstforsustainability.org
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Global Witness https://www.globalwitness.org/en/
Greenpeace https://www.greenpeace.org
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Mighty Earth https://www.mightyearth.org/
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World Air Quality Index https://waqi.info/
World Ocean Review https://worldoceanreview.com/en/
WWF https://www.worldwildlife.org
Quiet Mark https://www.quietmark.com/

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Fairtrade Gold https://fairgold.org/
International Labour Organization https://www.ilo.org
Responsible Minerals Initiative http://www.responsiblemineralsinitiative.org/

8.5.3 Animal Welfare

Better Life Label https://beterleven.dierenbescherming.nl/english
Royal Society for the Prevention of Cruelty to Animals https://www.rspca.org.uk/home
World Organisation for Animal Health https://www.oie.int/en/home/

8.5.4 Wood

Forest Stewardship Council https://fsc.org/en
FSC-Watch https://fsc-watch.com/
Programme for the Endorsement of Forest Certification schemes https://pefc.org/
Rainforest Foundation UK https://www.rainforestfoundationuk.org/

8.5.5 Clothing

Better Cotton Initiative https://bettercotton.org
Cotton Campaign http://www.cottoncampaign.org
Global Organic Textile Standard https://www.global-standard.org
Textile Exchange https://textileexchange.org

8.5.6 Energy

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Ember https://ember-climate.org/
Gold Standard https://www.goldstandard.org/
Intergovernmental Panel on Climate Change https://www.ipcc.ch
International Energy Agency https://www.iea.org
REDstack https://redstack.nl/en/
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Lieff Cabraser Heimann & Bernstein – Attorneys at Law https://www.lieffcabraser.com/
Motley Rice LLC – Attorneys at Law https://www.motleyrice.com/
Robert A. Bilott, partner at Taft Stettinius & Hollister LLP https://www.taftlaw.com/people/robert-a-bilott
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Rainforest Fund https://www.rainforestfund.org/
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8.6.2 Soft Law

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