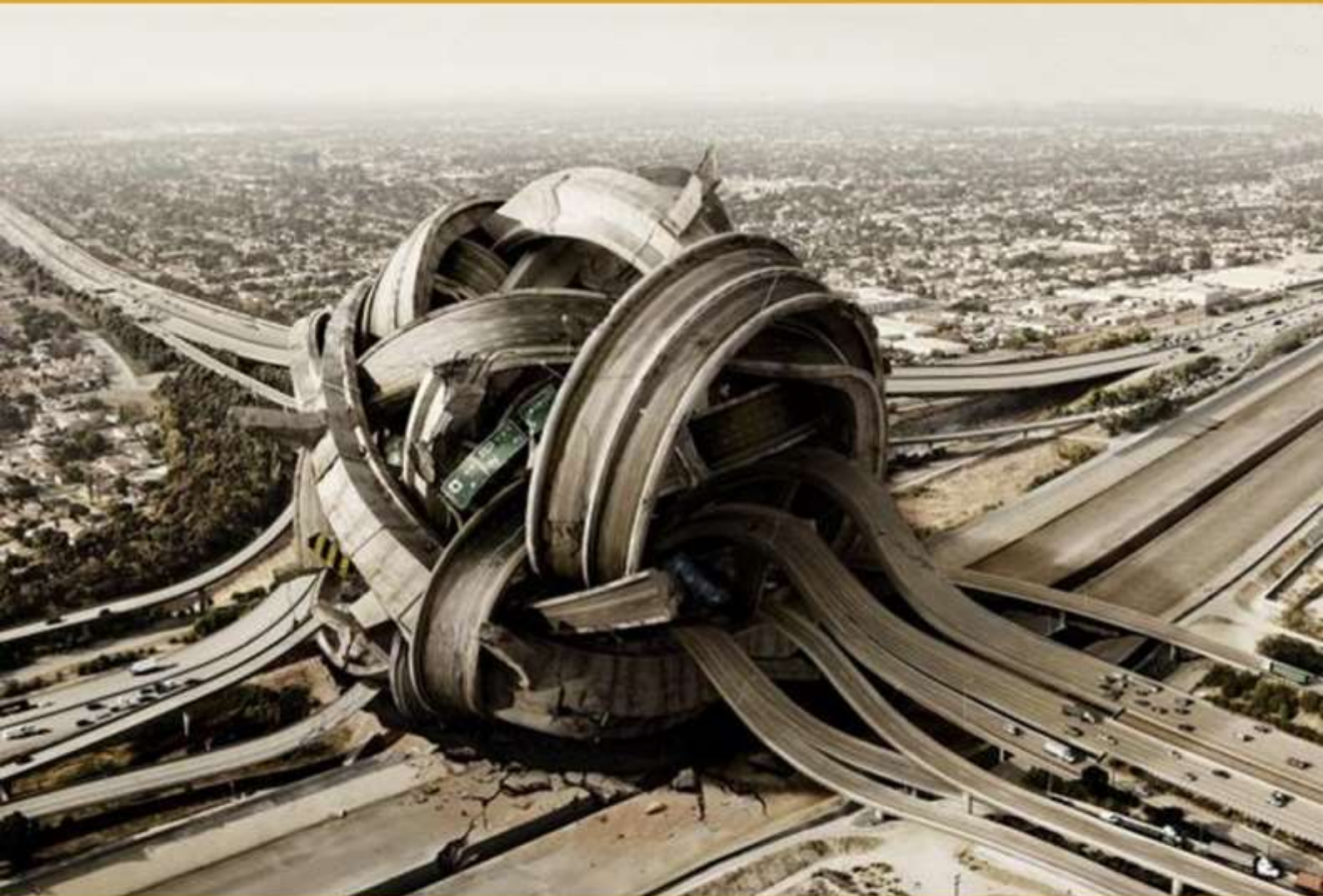


Mega-infrastructure as a mechanism of indebtedness

The risk of illegitimate, ecological and gender debt



ODG

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Mega-infrastructure as a mechanism of indebtedness. The risk of illegitimate, ecological and gender debt.

Objectives:

This report aims to 1) assess the global run for infrastructure finance and 2) the tendency of its financialisation, 3) explain the main mechanisms for indebtedness of mega-infrastructure projects and their risks especially for impoverished countries, 4) raise the question of illegitimacy of debt, also considering the creation of other debts such as ecological and gender debt, 5) provide concluding remarks and 6) evaluate the need of mega-infrastructure projects, presenting alternatives. Finally we will give 7) policy recommendations.

1. The global run to finance infrastructure

What does large infrastructure, mega-projects and mega-infrastructure mean?

Large infrastructure projects are mainly large engineering projects, which are complex systems that are usually led by a sponsor but include other players such as regulators, bankers and lenders. These projects can include a variety of types, ranging from highways, railways, ports, airports, industrial processing plants, oil or gas pipelines and storages to large dams and other energy production systems.

The concept of mega-projects (and the related term mega-infrastructure, used when talking about infrastructure) is particularly relevant when discussing issues around unclear governance and lack of open decision-making processes, wanting to emphasise and visibilise the usually grave social-environmental impacts and consequences. As Flyvbjerg (2014) points out, mega-projects are “...large-scale, complex ventures that typically cost US\$1 billion or more, take many years to develop and build, involve multiple public and private stakeholders, are transformational, and impact millions of people”.

Since the financial crisis shocked the United States and the international financial system in 2008, private investors have lobbied in international policy agendas to find and promote new lucrative assets. The financial crisis led to the total break down of old lucrative assets like, for instance, the housing market. Furthermore the economic crisis following the breakdown of the banking system worsened the real economy of most of the countries in the world (World Bank, 2008), leaving enriched countries¹ with a tremendous debt burden from their bank rescue plans, while impoverished countries had to deal with devastating impacts like large and rising fiscal deficits, collapsing reserves -being thus forced to sharply reduce imports-, and a decline in revenues for those who export oil and other commodities whose price had dropped on the world market. With crisis, shocked, negative or stagnating economies around the globe, international finance raised the question where to invest.

Based on the assumption of perpetual economic growth, mega-infrastructure projects are becoming the new asset for international investors and transnational companies to obtain benefits. Especially in the developing world infrastructure investment is presented to be the tool to economic growth². **But why is mega-infrastructure perceived as a motor for growth?** Neoliberal speakers of multilateral institutions like the World Bank (WB), the International Monetary Fund (IMF) and almost all important Development Banks are presenting a relative easy explanation: economic growth is not possible without large infrastructure. Once having a functioning infrastructure system, economic growth and therefore the return of the investment plus benefits come almost naturally, as large infrastructures will allow for large extraction of energy and material, and what is crucial, for an efficient transport to areas of production and consumption to certain countries and the Global North.

In the post-crisis economies of the enriched countries, investment in infrastructure is presented to its citizens as the solution to stagnating growth. In Europe, infrastructure investment is additionally presented as a tool to create jobs. The Investment Plan for Europe, the so-called Juncker Plan, argues that in order to “put Europe on the path of economic recovery”, the **Juncker Plan** is the tool to create “jobs and boosting growth by making smarter use of financial resources, removing obstacles to investment and providing visibility and technical assistance to investment projects” (European Commission, 2017).

However this is only half the truth. As the economic crisis and austerity plans have forced governments in the North to cut public budgets for investment in infrastructure, they remedy the lack of new public investment through new financial mechanisms that cut distances between private investors, financial institutions and governments (Guiteras, 2015). The Juncker Plan is only one example of this growing trend: public money is used to give confidence to private investors. For example, Juncker Plan’s funding instrument, the **Connecting Europe Facility** (CEF), intends to mobilize €315 bn in infrastructure for Europe. To achieve this huge amount the European Union is contributing with €16bn through public guarantees, the European Investment Bank (EIB) is contributing with €5 bn and the investors add the rest. All over the world infrastructure finance plans are being developed, promoting the same idea: offering public guarantees to obtain private finance. In practice, Private Public Partnerships (PPPs) are becoming the main actors in the new landscape of infrastructure finance.

The nature of the new infrastructure investment frameworks is versatile with regional, national, supranational or international institutions as well as private, private-public or public actors involved. For instance, a few years ago the EU launched the **Projects of Common Interest** (PCIs), a European investment plan to support infrastructure projects dedicated to update existing infrastructure or building strategic new ones. In October 2013, the European Commission (EC) published a list of 248 energy infrastructure projects, which were chosen under new guidelines for the *Trans-European*

¹ In this paper we use the term “enriched countries” when referring to developed countries and “impoverished countries” referring to developing countries. We use the term “developing world” to refer to the entirety of impoverished countries.

² See for example: IMF/Warner, 2015.

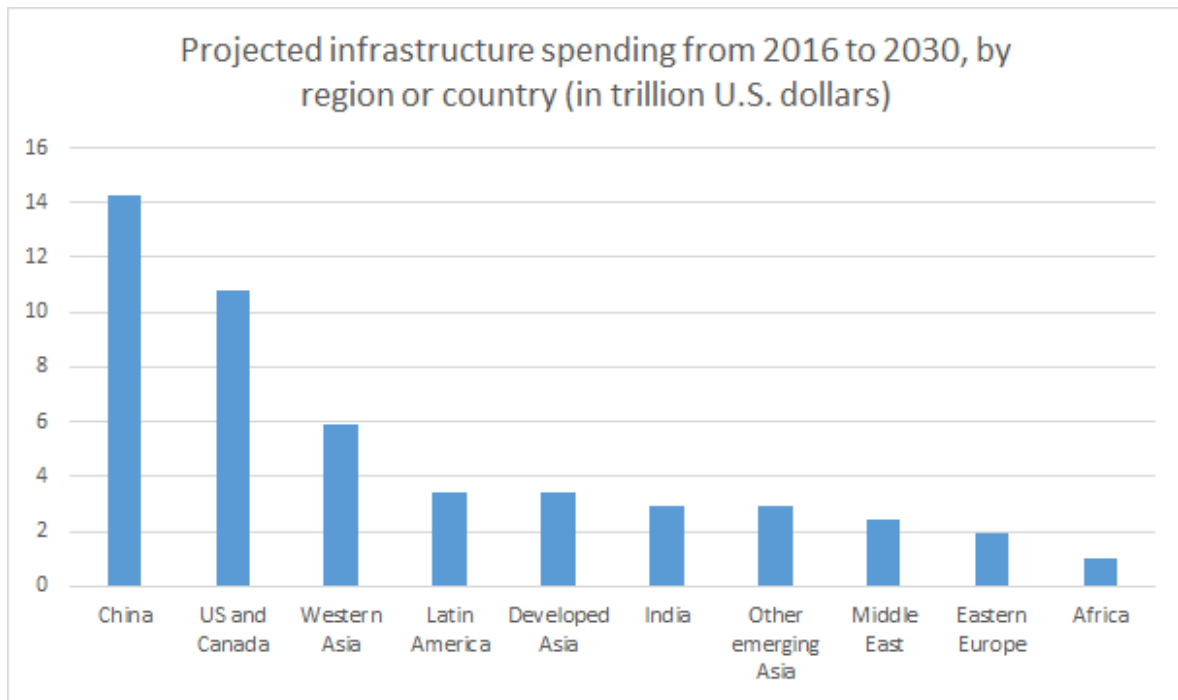
Networks for *Energy (TEN-E)*, which was designed to improve trans-European energy infrastructure in the period 2014-2020. These projects could potentially tap into the €5.12bn budget made available to the Connecting Europe Facility (CEF). In addition to the €5.12bn allocated for energy, the CEF financial envelope comprised €13.17bn for transport and €1bn for Information and Communication Technologies: €19.3bn in total at 2011 prices (Beizsley, 2014). Unfortunately, the list was drawn up without an adequate consultation period for local communities or civil society. The election of the projects raise doubts if the projects are really in the interest of the population.

An example for a Pan-European infrastructure investment plan is the **Deauville Partnership (DP)**, a trade partnership between the EU and North African countries³ including as well International Financial Institutions (IFIs) like the African Development Bank or the European Investment Bank (EIB)⁴ and supportive international organizations like the Organization for Economic Cooperation and Development (OECD). The official agreement was signed in May 2011 during a G8 summit in Deauville by the UN, the League of Arab States, the OECD and the Union for the Mediterranean. According to these international organizations the partnership will “promote home-grown strategies for sustainable and inclusive growth accompanied by a process of governance reforms to build efficient, effective and accountable public institutions” (UN, 2011). According to the WB, the region faces a deficiency of infrastructure that makes trade with Europe and the rest of the world costly. The possibility of a free trade zone with Northern Africa allowing financial inclusion with Europe and access to North Africa’s gas reserves, were the main reasons that convinced the European Commission to promote a large investment process through the EIB and the DP in order to develop new and old infrastructure that would better connect Europe and North Africa (Panadori, 2017). Between 2011 and 2014 the EIB granted through the DP more than €650 million in infrastructure in North Africa, investing in motorways and land connections (EIB, 2014).

However the most impacting trend in infrastructure financing is the international promotion of **infrastructure corridors**. These corridors, often called mega-corridors, are often planned on an inter-continental scale, and will cost trillions of euros in the near future. “No continent (apart from Antarctica) is excluded. From Africa to Asia and the Arctic to South America, infrastructure masterplans have been drawn to reconfigure whole land masses (and the seas connecting them)” (Hildyard, 2017). From the standpoint of a few, these corridors are seen as the solution to reduce transportation costs and times in order to connect more efficiently the production with the consumption countries. Critical voices are warning of the social and environmental consequences. Counter Balance argues in its 2017 report that these mega-corridors will affect hundreds of millions of people, “shifting them to make way for roads, ports, trains and airports or transforming them into pools of cheap labour for the mines, plantations and factories that the corridors will service” (Hildyard, 2017).

³ The Partnership includes Canada, Egypt, the European Union, France, Germany, Italy, Japan, Jordan, Libya, Kuwait, Morocco, Qatar, Russia, Saudi Arabia, Tunisia, Turkey, the United Arab Emirates, the United Kingdom and the United States.

⁴ The African Development Bank is the rotating chairman of the IFI platform that includes: the African Development Bank, the Arab Fund for Economic and Social Development, the Arab Monetary Fund, the European Investment Bank, the European Bank for Reconstruction and Development, the International Finance Corporation, the International Monetary Fund, the Islamic Development Bank, the OPEC Fund for International Development, and the World Bank.



The Belt and Road Initiative

One of the most ambitious and also most impacting infrastructure master plan is currently led by the People's Republic of China. The initially called One Belt and One Road (OBOR), that changed name to the Belt and Road Initiative mid-2016, aims to connect Eurasia through a land-based and ocean route following the ancient Silk Road. This immense development strategy proposed by China, is materialized in different programs. For example the Central Asia Regional Economic Cooperation (CAREC), which was formally launched in 2001, is a partnership of 11 countries¹ and six multilateral development institutions¹ that aim to promote regional integration through infrastructure and trade facilitation.¹ As the Deauville Partnership, CAREC does not fund projects itself but acts as platform for searching funds. In September 2016, CAREC had managed to secure an investment of \$28.9 bn in three core areas: transport (\$22.6 bn, 78%), energy (\$5.7 bn, 20%) and trade facilitation (\$0.6 bn, 2%) (CAREC, 2016). The main projects supported by CAREC have been the building (or improving) of 809 kilometres of expressways or national highways, the construction of a transmission line to export power from Turkmenistan to Pakistan, the planning of the Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline, and the development of a Central Asia-South Asia Regional Electricity Market (Hildyard, 2017). CAREC receives funding primarily from national member states, local municipalities, bilateral aid agencies and from CAREC's six partner development institutions.¹

2. Financialisation of infrastructure

What is financialisation?

The increasing importance of finance, financial markets, financial institutions, and financial elites in the operation of the economy broadly explain the process of financialisation. Within financialisation the patterns of accumulation move towards being generated through financial channels instead of trade and commodity production. Financialisation is also the attempt to open new markets, converting public commons into income revenue streams often underpinned with legal agreements with public institutions to guarantee profits (ODG, 2015). The concept of “subordinate financialisation” involves the idea that the Global North is able to impose its power to the Global South through finance. For example through globalising markets, directing internal profits to foreign investors, increasing consumption through debt and affecting local monetary policies (Powell, 2013). In recent debates, the example of Greece’s debt situation and its dependence on the Troika (European Commission, European Central Bank and IMF) has often been used to explain subordinate financialisation.

Meanwhile goods or people are restrained to physical borders all around the world, money is not. The architecture of the international financial system allows money to flow almost unrestrained to where it wants. The liberalisation of finance gave financial markets, financial institutions and financial elites the possibility to expand and gain step by step greater influence over economic policy and economic outcomes. This process is called financialisation. **The drive towards the financialisation of the wider economy is synonymous with more privatisation of public services and the transfer of power from the state to financial institutions, transnational corporations, hedge funds, equity funds, or other financial actors.** In general, the development of markets around essential services such as water or energy and natural commodities such as minerals has reshaped the world economy and is putting finance firmly at its centre.

Increasingly many aspects of our lives are becoming financialised because not only activities like extraction, production, or construction, are affected but also food, education and health are becoming assets for financial actors. The markets spawned by this process offer a perplexing selection of **financial products** all designed to generate wealth far beyond the initial value of the product or service (ODG, 2015). The role of financial products and institutions is being expanded and amplified in our everyday lives.

In the infrastructure sector, we also see a trend towards financialisation. Public project financing is losing importance whilst private financial actors are gaining importance. A variety of private investors, including investment funds, banks, insurers, pension funds and private equity firms are financing the building of mega-projects all around the world. The trend is backed up by International Institutions like the G20 or the OECD who argue there exists an “infrastructure financing gap” especially in impoverished countries that need these large investments to acquire Western visions of development. The World Bank estimated in its 2015 report to the G20, that “an additional US\$1 trillion to US\$1.5 trillion of annual investment in low and middle income countries will be required through 2020 to meet the infrastructure demand from industry and households” and conclude that “traditional funding sources will not be sufficient to meet the financing gaps’ (WB, IMF, OECD, 2015).

The financialisation of infrastructure has strong repercussions on which infrastructure is being built and who builds it, promoting particularly mega-infrastructure and a specific model of financing. The **BIG-BIG-BIG model** (large projects, large investments and large corporations) captures the attention of investors and their economic resources, subordinating small-scale proposals (XSE, 2018). This means that small projects have trouble securing funding. The big banks and the financial instruments used end up favoring mega-infrastructure and the big corporations that promote them.

3. Mechanisms of indebtedness through large infrastructure projects

When a promoter, a company or government, wants to raise the necessary funds for an infrastructure project, it can use all the traditional project finance instruments like debt through loans from private or public financial institutions and equity. For companies that are large enough to access financial markets, project bonds or corporate bonds can be emitted, as part of the debt finance.

In this chapter we will explain the main problematic debt mechanisms, which are used to finance mega-infrastructure projects. We consider them problematic as they bear hidden risks for indebtedness, often unknown by affected citizen or governments, the loss of sovereignty and loss of possibility to influence in the decision making process, which are dominated mainly by big corporations and financial actors.

3.1. Private debt and debt mechanisms of financialisation: Project Bonds and Public Private Partnerships (PPPs)

What is private debt?

Private debt is debt generated from a loan by a private entity, such as a bank. It may be guaranteed by the public sector in which case private debt can be converted into public debt. This can be achieved through a variety of instruments or mechanisms (see e.g. PPPs or ECAs).

Project Bonds

Financialisation of infrastructure brought a variety of financial instruments to finance mega-infrastructure projects and project bonds are amongst them. So far, project bonds have been utilised especially in Europe and America to fund infrastructure projects. In Europe, corporate bond markets continue to grow in spite of the increase in market volatility (Linklaters, 2012). However the trend is

global; in Kenya and Nigeria for example, project bonds have been implemented, as both countries have a growing investor base. In Nigeria, corporate bonds are tax-exempt while Kenya has specific exemptions for infrastructure bonds, encouraging their use as an alternative funding mechanism (Linklaters, 2012).

What are Project Bonds?

Project Bonds are a subset of Corporate Bonds (private debt). They are a debt security (a negotiable or tradable liability or loan) issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations. Project or corporate bonds are considered to have higher risk than government bonds. As a result, interest rates are almost always higher.

In enriched countries governments are working on institutional frameworks to promote and secure the bond market for infrastructure financing. For example, in October 2011, the EC announced the creation of the 'Europe 2020 Project Bond Initiative' (PBI). In June 2012 the EU launched the pilot phase and committed €220m from EU coffers towards the initiative, claiming this €220m would lead to €4.5bn of investment in infrastructure from the private sector (European Policy Centre, 2012). However, there is no proof if the leveraging of the €4.5bn occurred. Neither the EU Commission's Interim Report from 2013, nor the external evaluation of the Pilot Phase of the Project Bond Initiative from 2014 nor the EU Commission evaluation from 2016 measure the real creation of private sector investment since the implementation of the PBI.

The debt mechanism

The framework of the PBI initiative allows the division of the debt into two tranches; senior and subordinate. The EIB takes the burden of the subordinated tranche through a contingent credit line throughout the life of the project or a direct loan at the outset, known as the Project Bond Credit Enhancement (PBCE). As the EIB assumes the risk of the subordinated debt tranche, it increases the rating of the senior debt tranche to the much-desired single-A rating. This is seen as the ideal threshold to attract investors in capital markets. At the same time, the credit line is designed to mitigate the pressure on the promoter if it suffers from liquidity problems during the project. In fact, EU taxpayer act as a buffer to better insulate the promoter from financial risks (Beizsley, 2014).

Public Private Partnerships (PPPs)

The type of investor who will be willing to finance a project depends on the amount of risk involved. International Institutions recommend governments to develop "risk-sharing mechanisms and instruments to crowd in private investment via capital markets" (WB, IMF, OECD, 2015). In practice, governments offer public guarantees to attract private finance through the creation of a PPP.

What are PPPs?

A 'Public Private Partnership' (PPP) is a type of contract under which private companies build and operate public services and infrastructure but where much of the financial risk is guaranteed by the public (Hildyard, 2017).

At the heart of the global run for infrastructure financing stand the **Public Private Partnerships**. They are business ventures operated through a partnership between government and one or more private sector companies. PPPs can take various forms but usually feature a private company offering services on behalf of the governmental or local authority. Typically PPPs are medium to long-term arrangements, often 25-30 years. In infrastructure, the private sector is often charged with building and maintaining the infrastructure but is allowed to charge users through tolls or bills (or receive payments from governments) for offering a pre-agreed service (ODG, 2015).

There are many types of PPPs and there are many ways to classify them⁵. One of the most common ways of classification is according to i) the tasks carried out by the private sector in the PPP, ii) the investment responsibilities and iii) the ownership of the asset. This classification can result in a combination of the following functions: design; construction; development; rehabilitation; financing; operation; maintenance; property; transfer; and lease. An added difficulty is that PPPs vary considerably between sectors and countries.

A typology that is widely used is the classification according to the source of income from the private sector:

- "Paying user": The final user pays directly to a private partner the use of the infrastructure. This is usually done through the payment of a toll (for example, water taxes or freeway tolls), which can be supplemented by subsidies paid by the government.
- "The government pays": In this case the private sector company provides and manages infrastructure for the public authority. The private company receives periodic payments from the public partner based on the level and the use of service provided. An example of this can be shadow tolls used in motorways where governments pay for each user of the motorway.

The design of PPP projects is inherently functional to the financialisation of infrastructure by opening up the project to finance but also bringing other actors into the project under a financialised remit (ODG, 2015). Infrastructure funds, pension funds and private finance are raising the capital for PPP projects. The loans are often securitised which means they can be pooled together to diversify risk so they can be re-sold. If the project begins to be successful it can sell equity on the equities market at a profit, and it is often reinvested back into another early stage PPP project. This trading of equity in PPP projects is fuelling the creation of an enormous global market (ODG, 2015). Secondary trading, refinancing, securitisation and a lack of oversight by government are features of this secondary market. This is an alarming trend as the same pattern led to the bursting of the housing market in the USA (and later Spain) and started the latest financial - economic crisis.

The debt mechanism

When a national or local government agrees on a PPP financed project, it enters into a long-term commitment with the private provider often based on expected revenue generation during the life of the project. Incorrect demand forecasting, common in PPP projects, ties governments to underperforming infrastructure and thus a debt is created. (ODG, 2015). As PPPs work on a "buy now-pay later" basis they lock governments into long-term debt commitments.

Debt repayments related to PPPs swell on the balance sheets of public bodies creating lower expenditure flexibility and thus more pressure on other areas of the budget - as part of the concession agreement with the project promoter, PPP repayments are protected by national law (and effectively prioritised) and so if the public body needs to cut its operating costs, these cuts will fall on other services such as health and education (ODG, 2015).

⁵ Read more on PPPs i full report: Conde (2017).

Nonetheless PPPs remain popular with international institutions and governments alike. The EIB (EPEC, 2016), EC (Commission of the European Communities, 2009), World Bank (World Bank, 2017a) and the IMF (IMF, 2004) all support the increased role of PPP financed infrastructure project. The reason is that they are seen as a cheap and innovative way to finance infrastructure as governments don't have to indebt themselves officially. The debt is not recorded as public sector borrowing and therefore does not count as public debt. It's therefore a useful practice to meet neoliberal budgetary cuts and austerity policies.

However, PPPs have been controversial throughout their development. ODG's recent report (2017) shows that PPPs are a more expensive way of project financing and that PPPs often fail to provide the contracted service. It is argued that there is also a lack of state capacity for monitoring PPPs, lack of planning and lack of competition.⁶

The main problem with PPPs however is the hidden fiscal risk. The experience of various countries shows that the fiscal implications of PPPs pose a huge risk to the public sector that should not be underestimated and that should provide a clear lesson for other countries, especially in moments of budgetary constraints (Conde, 2017). Fiscal repercussions come from direct liabilities⁷ and contingent liabilities⁸. Contingent liabilities create a huge fiscal uncertainty and remain "out of balance" and, by their very nature, are not transparent. There are two different types of contingent liabilities:

- Explicit contingent: liabilities that appear as a result of public guarantees issued to offset the risks to private companies that are partners in PPPs. These risks may include fluctuations in the exchange rate, inflation, prices and changes in demand for a given service, amongst others. Governments are often in a position where they have to guarantee income streams higher than average to attract private investors. The list of guarantees offered by companies to make PPPs consider "bankable" is considerable. They may include repayments of loans, guaranteed returns, minimum income streams, guaranteed rates of exchange and guaranteed compensation if a new legislation affects the return on an investment (Cebotari, 2008; Eurodad, 2015).

- Implied contingent liabilities are highly unpredictable and often do not manifest until a PPP project has been affected (Eurodad, 2017).

Finally, there is a widespread lack of transparency as many countries do not publicly disclose full details of the contingent liabilities and guarantees associated with PPPs, nor the conditions that will be generated, which is also vital for public scrutiny (Eurodad, 2017; Conde, 2017). This makes fiscal policy decisions less informed and encourages governments to move forward with projects even when they can create fiscal problems in the future. It also means that citizens may be unaware of the fiscal vulnerability of their government.

⁶ Read more in full report: Conde (2017).

⁷ Direct liabilities are "viability gap" payments (capital contributions to ensure that an economically desirable but not commercially viable project can continue); "Payments for availability" (regular payments during the duration of the project, condition is the availability of the service or asset); or "payments based on results" (payments made by service unit).

⁸ Contingent liabilities are hidden costs, financial obligations that depend on the existence of an uncertain future event beyond government control (Cebotari, 2008).

The underground gas storage plant Castor (Spain)

The underground gas storage plant, Castor, promoted by the Spanish company ACS, was the first project of the pilot phase of the Project Bonds Initiative of the European Investment Bank. At the time of the first operative maneuver, the Castor underground gas storage caused more than 500 earthquakes, one of them of 4.2 degrees on the Richter scale.

Local population had been mobilizing more than seven years against Castor and denounced the bad planning and execution of the work, as well as warning of the risk of earthquakes. The promoter company decided to abandon the project and enforce clause 14 of the contract that contemplated the right of compensation for resignation and even for fraud or neglect. In June 2014, just after the earthquakes and before implementing clause 14, Fitch Ratings downgraded the Castor bonds from BBB+ to BB+ and maintained them on its Rating Watch Negative list. The BB++ rating marks a significant deterioration in the bonds' value as BB+ denotes 'non-investment grade' bonds (colloquially referred to as 'junk bonds'). The downgrading by Fitch of the Castor bonds put the Spanish government in a corner and, in a move to limit the further downgrading of the bonds and to shore up confidence among investors (ODG, 2014), the Spanish Minister for Industry, Energy and Tourism, José Manuel Soria, announced that the government expected to pay compensation to ACS for the residual value of the project (€1.7bn). Meanwhile the payment of the investors' bonds was secured, the Spanish tax payers were assigned an illegitimate debt, which amounted to €3.42 bn.

3.2. Bilateral debt mechanisms: Export Credit Agencies (ECAs)

What is bilateral debt?

We refer to bilateral debt when one government owns debt to another. It is a loan arrangement between a single borrower and a single lender. Such loans are called "bilateral" because there are only two parties to the loan, each with an obligation to the other.

Export Credit Agencies (ECAs)

In impoverished countries, many risky infrastructure projects receive support through foreign Export Credit Agencies (ECAs). ECAs are public agencies that provide government-backed loans, guarantees, credits and insurance to private corporations from their home country, more clearly, they use taxpayers' money to help companies invest and export overseas (Wiertsema, 2008). Their purpose is to protect companies against the risks of not being paid while operating abroad, making it thus easier for the companies to do business abroad, particularly in the so called financially and politically risky developing world. Most enriched countries have at least one ECA, which is usually an official or quasi-official branch of their government.

Today, ECAs are among the largest sources of public financial support for foreign corporate involvement in infrastructure projects in impoverished countries. For example, ECAs are estimated to support twice the amount of oil, gas and mining projects as do all Multilateral Development Banks such as the World Bank Group (ECAWatch, 2017). In recent years ECAs are estimated to have supported between US \$50 - \$70 billion annually in what are called "medium and long-term transactions," a great portion of which are large industrial and infrastructure projects in impoverished countries (ECAWatch, 2017).

The ECAs largely lean on the Debt Sustainability Framework developed by the IMF and the World Bank. However, the framework is not well defined. In practice, ECAs do not have a development mandate and therefore can fund projects that would not receive funding from development institutions such as the World Bank. As ECAs are government supported, they can take more risk since the government backing allows ECAs much more leverage in recuperating arrear payments than private insurance companies would be able to afford (Wiertsema, 2008). Therefore they tend to fund risky projects that, in practice, often have negative development impacts: damaging the environment, violating human rights or being responsible for the loss of livelihoods of local communities. For example, in 2006 began the construction of the hydroelectric Ilisu Dam project in Turkey, which initially received support by the German ECA Euler Hermes Deutschland AG, the Austrian Oesterreichische Kontrollbank AG and Swiss Export Risk Insurance. The dam will be inundating an area with 12.000 years of history and some 300 archaeological sites⁹. After the three ECAs pulled out of the project due to public pressure, the construction proceeded with Turkish funding and the dam is finally close to completion.

The debt mechanism

⁹ Ninety per cent of the ancient city Hasankeyf will disappear and with it, the houses of almost 8000 inhabitants, important heritage sites like the largest surviving arch bridge from medieval times along with mosques, and other historic buildings, as well as more than 100 endangered plant and animal species (Tastekin, 2017).

ECAs are the largest source of bilateral external debt held by impoverished countries. Eurodad estimates that almost 80 per cent of their debt to other governments came from export credits, not development loans (Sundsbo, 2011). ECAs have the unique ability to pass the original risk of a private company on to host governments and therefore make it possible to turn business risks of private companies of industrialised countries into public debt of impoverished countries (Wiertsema, 2008).

But how do private companies' credit turn into public debt? As mentioned, ECAs back up private companies' transactions abroad. When a business partner in an impoverished country does not pay, the ECA compensates the foreign company for its losses. The government supported ECA puts then pressure on the impoverished country's government to fulfil the business agreement or directly claim the debt, transforming it into a public debt for the hosting country. "The claims made by ECAs are often accepted by developing country governments out of concern about the possible damage to trade and investment relations with industrialised countries. ECA claims may also be supported by what is known as a *sovereign counter guarantee* from the developing country government" (Wiertsema, 2008). This is an official declaration that the host government will assume responsibility for defaulting private sector transactions.

When impoverished countries are unable to meet the ECAs debt claim, they accumulate debt. If they need to negotiate the rescheduling or cancellation of their debt they won't do this with the individual ECAs, but with all creditors collectively at the *Paris Club*. It is an informal group of 22 industrialised creditor countries hosted at the French Ministry of Finance, whose purpose is to find solutions for payment difficulties of bilateral external debt. As ECAs manage most of the bilateral debt claims, they are key participants in the delegations of the *Paris Club*. All Paris Club agreements require indebted countries to accept and implement macro-economic restructuring and liberalisation programmes as directed by the IMF. The political price of a Paris Club deal is therefore the loss of sovereignty for the impoverished country.

Furthermore, when a debt cancellation agreement has been achieved, ECAs do not write off the debt at their own expense. Almost all OECD countries report such expenses as Official Development Assistance (ODA). This is allowed according to international regulations developed by the Development Assistance Committee of the OECD. In a situation of declining levels of aid since the financial economic crisis, this practice puts further pressure on many impoverished countries. Instead of aid they continue to depend on uncontrolled private finance from abroad to fund their infrastructure projects.

3.3. Multilateral debt mechanisms: Loans through Structural Adjustment Programs (SAPs)

What is multilateral debt?

Multilateral debt is the debt owed by countries to International Financial Institutions (IFIs), like the World Bank, the International Monetary Fund and other multilateral institutions, regional development banks and inter-governmental agencies. Governments from enriched countries allocate tax revenue and provide guarantees to the multilateral institutions, which allow them to provide loans to (mainly) impoverished countries.

Structural Adjustment Programs (SAPs)

Multilateral debt is a problem for the entire developing world, but it is a particularly heavy burden for the most impoverished countries. Low-income countries (defined by the World Bank as those with per capita GNP below \$785) owe most of their external public debt to International Financial Institutions (IFI's) because they cannot access private credit through access to global financial markets. According to World Bank data, low-income countries' multilateral debt made up to 42.4% of their total external debt in 2016. This means an increase by some 413% since 1970. In low-income countries, infrastructure projects are mainly financed through multilateral credits given by development banks like the World Bank (WB). Meanwhile the IMF provides financial support for balance of payments needs upon request by its member countries, development banks, lend for specific projects.

The debt mechanism

When governments address IFI's in search for finance for infrastructure projects, they firstly have to fulfil a list of requirements set up by the creditor. For instance, the project must be considered strategic for the country's economic growth, fulfil development objectives¹⁰, taking into account technical, economic, environmental, and social considerations, and related risks and guarantee the return of the loan.

Governments can opt for a variety of financial instruments. The WB for instance offers Investment Project Financing (loan, credit and guarantee financing to governments for activities that create the physical/social infrastructure necessary to reduce poverty and create sustainable development), Development Policy Financing (loan, credit and guarantee budget support to governments for policy and institutional programs), Program financing for strengthening institutions and building capacity, funds for emergencies and natural disasters, financing of private sector (direct investment and guarantees).

Accepting multilateral credits come along with conditions attached, which lead to the loss of sovereignty of impoverished countries in favour of the IFI's. The conditions in order to receive multilateral credits concern structural changes in politics and economy. Especially the IMF imposes structural adjustment programs (SAPs), which basically reorient economies towards privatization, benefiting corporate interests while reducing spending on social programs and locally oriented production. SAPs, are designed to transform economies from production for the local market to a "globalized" model of production and export of whatever garners the most hard currency (Institute for Policy Studies, 2005). Furthermore SAPs redesign the political, industrial, and commercial systems with the object to guarantee the paying back of debt servicing.

SAPs have almost invariably caused increased poverty, unemployment, and environmental destruction and have usually led to an increase in the overall size of a country's multilateral debt. The universal failure of the standard SAP recipe has meant that debt and structural adjustment simply end up fuelling each other (Institute for Policy Studies, 2005). The impact of multilateral debt for the most impoverished countries is therefore critical in two ways—through the diversion of national resources to debt services and through the effects of SAPs chaining national governments to implement neoliberal politics dictated by foreign authorities.

Most of the indebted countries in the developing world are kept in a debt trap. They are forced to take new loans in order to pay back old ones or risk default and potential economic collapse. Repaying debt is difficult as debt services exceed often the countries possibilities; economic growth is slowly and

¹⁰ World Bank Group (2017) Bank Policy. Investment Project Financing. Available at: <https://policies.worldbank.org/sites/ppf3/PPFDocuments/c02d2c9f0ac348ae959d292cb9f342f8.pdf>

depends on external shocks (like the global commodities market) and internal factors like corruption and capital flight. Multilateral debt cancellation campaigns, like the IMF-World Bank Heavily Indebted Poor Countries (HIPC) Initiative and the Multilateral Debt Relief Initiative (MDRI) have brought some punctual alleviation for the most indebted countries, but are by far not enough to achieve a real structural change.

A failed Structural Adjustment Program (SAP) in Ghana

Qualified for multilateral debt relief under the Heavily Indebted Poor Countries (HIPC) Initiative and the Multilateral Debt Relief Initiative (MDRI) after implementing satisfactorily SAP policies, in 2005 Ghana was one of the 36 Post-Completion-Point Countries, which received the full amount of debt relief, which amounted in the case of Ghana to approximately US\$381 million¹. However, today Ghana is in debt crisis again. Its government debt has grown from \$2.3 billion to \$19 billion since 2005. Falls in the price of gold and oil have led to Ghana's revenue dropping dramatically, with GDP in dollar terms falling by 25% (Jubilee debt Campaign 2017). Multilateral institutions and other governments however have lent heavily to Ghana, although the IMF and the World Bank have assessed Ghana as at high risk for not being able to pay its debt - and even this is based on very optimistic assumptions such as GDP growing by 8% per year for the next twenty years (the average for the last eight years has been 4%) (Jubilee debt Campaign 2017). In October 2015, the World Bank broke its own rules by guaranteeing \$400 million for a high interest private loan.

4. Mega-infrastructure and the creation of illegitimate, ecological and gender debt

Mega-infrastructure projects have drawn attention through their negative environmental and social impacts all around the world. Civil society and affected communities are fighting to make visible the

impacts and risks and mobilize against controversial projects. In this line, analysing the mechanisms of indebtedness of large infrastructure projects is important in order to be aware of the impacts of present projects and if possible prevent future projects - but is not enough. We argue that there are many cases of illegitimate debt related to mega-infrastructure projects as well as types of debts such as ecological debt and gender debt.

4.1. Illegitimate debt

The problem of illegitimate debt has gained high attention with civil society, economists and lawyers during the last decades. A good theoretical and juridical argumentation of illegitimate debt as a concept was useful in debt cancellation campaigns, which started in the 90s through for example the Jubilee Campaigns. Also the concept of odious debt, coined by A.N. Sack (1927), gained attention in international debt discussions (Scherer, 2010). According to Sack, a debt is odious if the lending is not benefiting the population and if it was given without agreement of the population and if the creditor was aware of the wrong use of the fund (Erlassjahr, 2008). In this sense, odious debts relate mostly to debts of corrupt regimes or brutal dictatorships. International campaigns on odious debt has contributed to a new political dynamic resulting in a more intense academic debate, which led to broader discussion on Sack's original definition of odious debt (Mader 2009).

When defining illegitimate debt we follow the definition of the Committee for the Abolition of Illegitimate Debt (CADTM)¹¹, as it takes into account the recent trend of financialisation and the debt created by the private sector.

Illegitimate debt is a debt that the borrower cannot be required to repay because:

- the loan, security or guarantee, or the terms and conditions attached to that loan, security or guarantee, **infringed the law (both national and international) or public policy.**
- such terms or conditions were grossly **unfair, unreasonable, unconscionable or otherwise objectionable.**
- the conditions attached to the loan, security or guarantee **included policy prescriptions that violate national laws or human rights standards.**
- the loan, security or guarantee **was not used for the benefit of the population.**
- **or the debt was converted from private (commercial) to public debt under pressure to bailout creditors.**

The principle of shared responsibility of creditors and debtors is at the heart of illegitimate debt as a concept: "Debtors and creditors must share responsibility for preventing and resolving unsustainable debt situations" (UN, 2002). The illegitimate debt campaigns focus especially on the issue of creditor liability and misconduct. In this sense, many cases of illegitimate debt have been detected, where governments from enriched countries have paid funds to corrupt regimes "in order to buy political allegiance, or [...] to help rich country companies to do business abroad [while] development was never their original purpose" (EURODAD, 2007). One of the most tragic cases occurred in 1993, when the German Export Credit Agency Hermes sold a large part of the navy of the former German Democratic Republic (GDR) to Indonesia for a total sum of US\$466 million. In 1999, the Indonesian army used the German ships and supported militia and in the massacre in East Timor and in other internal armed conflicts.

¹¹ See <http://www.cadtm.org/Definition-of-illegitimate-illegal>

One of the most recent example for illegitimate debt is **Greece's public debt**. The Debt Truth Committee found that the Greek debt is odious, illegal and illegitimate and wholly unsustainable¹². In its June 2015 preliminary report, the Debt Truth Committee demonstrated that the largest part of Greece's post-2009 debt was in fact private debt converted into sovereign debt. The same countries and institutions that converted private into public debt later entered into a series of loan agreements and Memoranda of Understanding (MoU) from 2010 onwards, the bulk of which was used to repay the aforementioned debt and the ensuing interest, while at the same time imposing upon the Greek population conditions of extreme austerity.

There is a strong link between infrastructure and illegitimate debt. Mega-infrastructure projects often match the definition of illegitimate debt specified above. For example in the Castor case (Spain) mentioned in Section 3.1, the conditions were unfair, unreasonable and didn't benefit the population. The same happened in the case of Inga Dam I and II (Democratic Republic of Congo). The list of cases is large; in its 2015 report, the ODG (Cotarelo, 2015) analyses the **legitimacy of payments and debts generated by the Spanish electric sector** in the period 1998-2013. The government embarked on a liberalisation process during that time. This sector received payments and generated debts, which can be considered illegitimate because they did not respond to the interests of the population. In some cases the State had normalized unjustified costs, in others because the price paid for the infrastructure was much higher than planned (and could have been) or the service offered was insufficient. In some cases the opacity of the price mechanisms pointed to illegitimate debt, as well as the illegitimate debt interests generated. The ODG also found that in some cases they compromised the welfare and safety of the population, environmental sustainability and the rights of future generations (Cotarelo, 2015). The result of the analysis of the payments and debts to the Spanish electric sector indicates that the illegitimate debt could amount to 76,680.78 million euros, that is, the equivalent of 10% of the annual Spanish GDP or 117% of the cuts imposed by the Spanish government in 2012 (Cotarelo, 2015).

Debt relief campaigns have played a mayor role in the promotion of multilateral debt cancellation through the debt relief initiative for Heavily Indebted Poor Countries (HIPC Initiative). Due to pressure from civil society, this joint IMF-World Bank initiative was launched in 2005 and terminated in 2015. It aimed to cancel 100 per cent of debt claims on countries that had reached, or would eventually reach, the completion point, the stage at which a country becomes eligible for full and irrevocable debt relief. There are also examples in which Northern governments have acknowledged co-responsibility for irresponsible lending. In October 2006, Norway agreed to cancel US\$ 80 million of illegitimate debt of five countries, which derived from domestic-interest driven lending; the selling of fishing boats to promote the Norwegian boat construction industry during the 1970s and 80s. Nonetheless, until today there does not exist an international authority or institution which governments or citizen could address when claiming illegitimate debt.

The Inga Dam I and II

The Democratic Republic of the Congo reached the completion point of the HIPC Initiative, after implementing satisfactorily the IMF's poverty reduction and growth strategy. In 2010 the IMF and the WB announced debt relief for US\$12.3 in debt services. Most of DRC's external debt is defined by debt campaigners as an illegitimate debt as it was generated during the era of Mobutu Sese Seko's dictatorship (from 1965 to 1997). Credits were given without consent of the Congolese people as Mobutu controlled all decision making positions, the loans did not benefit the Congolese people and the creditors were aware of the wrong use of the loans. In 1978 Zaire's debt was around US\$ 5 billion, twenty years later, after the fall of his regime, Mobutu left his country with a total debt stock of around US\$ 12 billion (Froenillo, 2007). Estimates are

4.2. Ecological debt

Ecological debt is defined as the debt contracted by enriched countries with other countries due to the historical and present extraction of their natural resources, the externalised environmental impacts and the free use of the global environmental space to deposit their waste. There are different categories of

ecological debt: carbon debt, biopiracy, environmental liabilities, export of toxic waste and substitution of crops for export.¹³ The term ecological debt appeared in Latin America as a response to the institutional proposals of the Earth Summit in Rio de Janeiro in 1992, where a "debt swap for nature" ("*canje de deuda por naturaleza*") was proposed (Salleh, 2009).

This concept appears at a time when the obligation to pay the external debt and its interests requires indebted countries to increase their productivity, impoverish their population and abuse nature in the form of intensive extraction of natural resources. Ecological debt also exerts a tough criticism, which in turn is a claim, on the concept of externality. Based on ecological economics theory, the economy is regarded as a subsystem inserted into a larger ecological system, from which it gets materials and energy and into which it returns waste and emissions. All activities produce environmental impacts or generate waste that are called externalities. This terminology implies that such externalities could be valued in monetary terms and internalized into the price system. For example, a factory that pollutes a river could internalise in the final cost of its products the cost of cleaning the river and compensating its users (although it would probably won't do it because then it won't be competitive). However, users cannot always be compensated economically; loss of livelihoods or extinct species cannot be priced or compensated. For this reason ecological economics theory advocates for the acceptance of different valuation languages where other values other than money can be taken into account to decide whether a project goes forward or not. It also suggests these decisions need to be taken through genuine participatory processes.

For example, if Tanzania, Mozambique, Angola, Australia or the USA decide to build new gas export plants requiring multimillion-dollar investments, they should also take into account the externalities that a project of this magnitude will entail: the socio-environmental impacts of extraction, the change of landscape by the large gas pipelines towards the export plants, the construction of the plant itself and the tons of associated waste. The externality that best illustrates the construction of this type of infrastructure are methane emissions that leak through the gas supply chain and the CO₂ emitted in the combustion of gas (Nualart, 2017). Even if there existed the intention or the means (through a CO₂ market for example) of compensating for these emissions economically, the impacts of methane gas and its impact on climate change would very difficult to calculate and quantify in monetary terms only. If all of the equivalent CO₂¹⁴ emissions were accounted for and taken into account when planning such projects, that is, if CO₂ was internalized, and compared with other policies such as management strategies of energy demand reduction, energy efficiency and distributed generation with renewable energies, the decisions would be quite different regarding what types of projects are necessary and worth to promote, build and operate.

It's important to notice that in speaking of countries we may conceal the reality that in practice it is the national and transnational elite from the exporting and importing country that benefits from the situation. Therefore, a more adjusted term could be the ecological debt of the elites.

The construction of mega-projects and the ecological debt of the elites have a strong relationship. We can find numerous cases in recent history. For example, the Interstate Highway System (IHS) in the USA and its relation of consumption of cheap oil and the exponential increase of CO₂ emissions. Between 1950 and 1960, the highway interconnection system and the progressive dismantling of the railway systems, offered gigantic benefits to the company General Motors, which had previously been named

¹³ www.quiendebeaqui.org/kitbcn/semana07/deudaecologica/deudaecol-general/Introduccio%20al%20deute%20ecologic.pdf

¹⁴ The equivalent CO₂ contemplates the methane multiplied by its climate change potential (86 times that of CO₂ in the first 20 years) and the CO₂ itself of the combustion of gas.

as one of the promoters of IHS. In fact, Charles Erwin was selected by the Eisenhower administration as Secretary of Defence of the USA when he was still director of General Motors.¹⁵

Another well-known case is the one of the **Aral Sea** that entailed its desiccation and doomed the regional fishermen to extreme poverty. The government of Nikita Khrushchev decided to turn the USSR into the world's largest cotton exporter, decision that resulted in the diversion of two large rivers, Amu Darya and Sir Darya, which historically ended at the Aral Sea, now irrigated cotton fields in Kazakhstan and Uzbekistan. In spite of being one of the largest exporters of cotton in the world, the USSR contracted a huge ecological and social debt with the territories nearby the Aral Sea¹⁶.

More recently, we can find examples in the **EU concerning the import of energy resources**. The EU has begun a process to close national coal mines, importing instead cheap coal from Colombia. This "subcontracting" of the extraction has allowed to outsource the activity and all its impacts, as well as to disintegrate step by step the strong European mining unions. Colombia is gaining importance as a coal exporter. The reasons are geologic, as it has considerable amounts of coal in the subsoil, but also political. The Colombian government adjusted the legal framework to promote mining activity and to signal to companies and investors that Colombia is a good country to do mining. The construction of large extraction complexes, such as the Cerrejón, the largest open-pit coal mine in the world, and transportation and export infrastructure corridors, have generated a huge impact on the communities affected by the activity (XSE, 2018). Undoubtedly, the European outsourcing of the mining activity is not accompanied by the guarantee of labour rights or environmental standards. The internalization or co-responsibility of the social and environmental impacts that provoke such an aggressive activity, generates an ecological debt between the Colombian population and the European and global¹⁷ elites.

The Southern Gas Corridor (SGC)

The Southern Gas Corridor is one of the largest energy infrastructure projects promoted by the European Union until today and will generate a great ecological debt. This mega-project seeks to transport gas from Azerbaijan and Turkmenistan to Italy, and is receiving great political and financial support from the European Community. The SGC is the union of "gas for €", between the EU and the corrupt and repressive regime of the Aliyev family, which has been governing Azerbaijan since 1991. It is an attempt to gain importance on the international stage by limiting Europe's dependence of Russian gas. However, with its more than 3,500 km, doubts are growing if the project and its transport capacity is reasonable. The environmental impacts of the SGC already begin to be visible on the territory. In Italy, the local population of the Puglia have organized the Non-TAP Committee to reject the SGC, due to the damage it could provoke to local ecosystems and landscapes, and because it can affect its agriculture-based economy and family tourism (Bacheva-McGrath, et al., 2015). With the addition of the possible methane emissions due to its transportation contributing to global climate change, again we face a huge ecological debt (Pérez, 2017).

4.3. Gender debt

¹⁵ <https://web.archive.org/web/20080215220316/http://etext.virginia.edu/journals/EH/EH38/Norton.html>

¹⁶ <http://www.iml.rwth-aachen.de/elearning/srw/uebungsmaterial/AralSeaDisaster.pdf>

¹⁷ Colombian coal mines are run by companies such as Drummond (USA) or Prodeco, part of Glencore (Switzerland) that serves coal for the European electric supply like E.ON, GDF Suez, EDF, Enel, RWE, Iberdrola and Vattenfall.

In the same way that ecological debt claims to recognize that there is a debt of some countries and social groups over others for the use and abuse of nature and natural resources, the **gender debt confronts us with the need and dependence of our bodies for receiving care, and reminds us that, as we live in patriarchal societies, this work is mostly realized by women.** The interdependence between people is also combined with ecodependence because humans and the whole of biodiversity depends on the finite resources of the planet (Bayas, 2017).

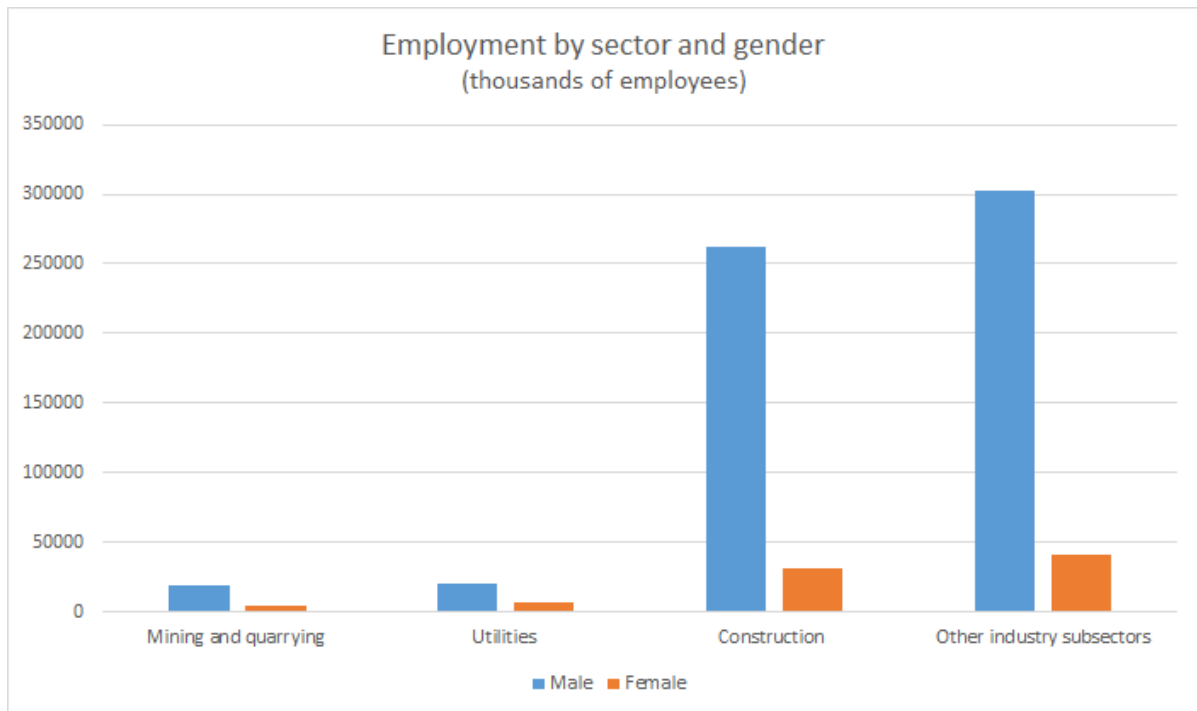
On one hand, if we relate gender debt with the promotion, projection, construction and operation of mega- infrastructures, we can observe that different schemes and tools are used, ranging from PPPs to Project Bonds, which through specific public guarantees end up giving preference to mega-projects instead of supporting the caring for our vulnerable bodies. To give a clear example, in 2011 the socialist (PSOE) and conservative party (PP) from Spain, launched an express reform of article 135 of the Spanish Constitution. Under the justification of budgetary stability and to comply with the requirements of Brussels, they agreed to establish a deficit ceiling, including this paragraph in its article 3: *Credits to pay interest and the public debt capital of the Administrations will always be understood to be included in the state of expenditure of their budgets and their payment will have absolute priority.*

This "**absolute priority**" has a large significance: debt services have preference before public social spendings in health or education, or any public policy related to caring¹⁸. In the case of Spain this is significant. The payment of the debt generated by the airports of Castellón, Huesca, Murcia, the multimillion-cost radial highways of Madrid, the Castor project of Florentino Pérez, to mention some of the unsuccessful or expensive mega-infrastructure projects, have preference with respect to the life and the care of the people.

On the other hand, it is necessary to analyze the **labor dimension of mega-infrastructure** projects because they are frequently presented as a great opportunity to boost the economy and generate work, although there are few studies that include what type of work they offer and for whom. Both in the past and present, the sexual division of labor, and the consequent specialization and widespread responsibility in care work, have hindered women's access to income and wealth levels in conditions of equality with men. Inequalities affect the access, insertion and continuation of women in the labor market, as well as the salaries they receive for the work they perform. This results in an unequal distribution of resources, times and responsibilities between men and women, producing a horizontal segregation; where women are concentrated in a narrower range of types of work and levels of occupation (hours of employment) and a vertical segregation, where women occupy jobs of lower rank, salary and responsibility.¹⁹

¹⁸ www.icariaeditorial.com/pdf_libros/Vivir%20en%20deudocracia.pdf

¹⁹ http://www.fuhem.es/proyecto_igualdad/pdf/cap_3.pdf



For example, in the hydrocarbon sector, which includes the construction and operation of large extraction, refining and transportation projects; the majority of jobs, and those with the highest qualification, are occupied by men. In Aker Solutions, for example, the largest international contracting company for the oil and gas sector, women constitute 24% of the administrative staff, but only 3% of the skilled workers (Aker Solutions, 2008). In Trinidad and Tobago, the majority of women with contracts in the oil and gas industries hold administrative positions, but only 10% of non-administrative contract workers are women (ILO, 2009). Trade unions in Australia's oil and gas industries report that working conditions in the sector contribute very little to the promotion of gender equality.²⁰

To conclude, mega-infrastructure should also explore and include **“other debts”**. The concept of debt is generally tied to economic or financial terms. Normally, debt is quantifiable; it can be cancelled, can be transferred and can be bought and sold. It also has connotations of duty and obligation of payment. Debts must be paid, regardless of the debtor’s or conditions in which the loan was contracted. The concept of illegitimate debt questions this merely economic debt concept by introducing the idea of morality and justice. Debt is a question of responsibility from both, the debtor and the creditor and must be treated fair and equally between them when confronting unsustainable or unfair debt burdens. However, when it comes to evaluate critically the debt a mega-infrastructure project is generating, we have to take into account the ecological debt and the gender debt. In contrast to the economic debt formulation, these other debts are being visibilised, using the economic language, or rather re-appropriating it. These other debts do not seek to be quantified in euros, dollars or yen, they seek the visibility and the reversion, of an unfair and unequal relationship.

²⁰ Responses to the OWTU (Oilfields Workers' Trade Union) and MUA (Maritime Union of Australia) surveys in 2009.

5. Conclusions

The risk of a new financial crisis - an infrastructure bubble

The global run to finance infrastructure has an alarmingly similar pattern to what happened to the housing market before the burst of the housing bubble. In other words, infrastructure financing could turn into the next bubble and provoke a future crisis, similar to the recent international financial and economic crisis. Housing was handled like infrastructure today: a lucrative asset for international investors. The global financial and political elite, including governments, multilateral institutions, financial actors and big corporates, are developing and implementing all kinds of legal frameworks and instruments in order to facilitate and secure the infrastructure market. This paper has discussed Project Bonds and PPPs as tools of financialisation, but more mechanisms exist and others will be developed. A specially worrying growing trend is the trade of infrastructure securities on the secondary market; it's a risky and unpredictable financial activity that already in 2008 was one of the main reasons behind the chain reaction of the financial crisis.

Many mega-infrastructure projects are useless and imposed

The examples given in this paper have shown clearly what type of infrastructure is being promoted by the financial and economic elite all around the world: mega-infrastructure. Who benefits from this type of infrastructure? Not citizens and local population in either enriched or impoverished countries. Mega-infrastructures benefit mostly the local upper class that has access to foreign currency and is in some occasions involved in corruption, as well as the international financial and economic elites. As shown in the cases described, a lot of mega-infrastructure projects do not respond to the real needs of the population but to the needs of international financial actors that see in mega-infrastructures a lucrative asset. Many mega-infrastructure projects can therefore be described as useless and imposed.

The loss of infrastructure as a public good

In the rush towards financialisation, infrastructure is no longer thought of as a public good. Key infrastructures across the globe are being privatised and treated under market terms. This process must be questioned especially when it requires a public risk-sharing mechanism, such as Public Private Partnerships, to achieve its aims. This mechanism responds to well established pattern of the capitalist system that privatises benefits and socializes losses, applied in this case to the infrastructure sector. To make matters worse, it stands at the core of almost all financial instruments promoted by the political, economic and financial elites.

Lack of transparency and democracy in decision-making processes

The increased financialisation of infrastructure is characterised by a lack of transparency and the shift from public decision-making regarding the control of key infrastructure to decisions made at private board meetings and Annual General Meetings, from which the public is largely excluded. The process of negotiation and developing infrastructure plans and frameworks is also extremely anti-democratic. Social movements, for instance, have little or no voice in the discussions within the G20 or EC on infrastructure development - and plans are being promoted without any real accountability to citizens (Hildyard, 2017). With infrastructure so critical to the everyday life of the population, it is hard to see how side-lining the public's role in the decision-making processes on infrastructure and infrastructure planning could be beneficial at all for the citizens.

The risk of the invisible debt

Regarding the mechanisms of indebtedness through infrastructure projects, special attention has to be paid to the invisible debt, this debt and its risk is hidden from national accounts and from the public. Two ways in which this invisible debt is generated is through PPPs and ECAs. A PPP infrastructure project that does not perform well -either due to incorrect calculations of the project's capacity to repay itself and its demand or incorrect calculations relating to its future usefulness-, generates a debt which has the potential to fall back on the public in the future. ECAs operate with the same logic. When the secured company is not performing well due to external factors and is not obtaining the planned benefits, the ECAs will claim the debt to the host government. In both cases is the tax payer from the enriched or impoverished countries who has to repay the debt for an infrastructure that in some cases didn't even benefit from.

Debt trap and new debt crisis in impoverished countries

Through funding of new mega-infrastructure projects, many of the most impoverished countries are at risk to being kept in a debt trap, increasing their dependence on foreign creditors. In order to meet debt services and to finance infrastructure and other spending such as health, education and administration, they have to keep on borrowing and increasing their external debt. As their possibility to repay debt is limited due to moderate economic performance; multilateral loans are more common than bilateral and private borrowing. What is crucial is that multilateral loans offered by IFI's commit governments to adapt Structural Adjustment Programs (SAPs), which undermine national sovereignty as they dictate neoliberal economic reforms and force governments to austerity policies.

Regarding the financial situation of impoverished countries, it is important to point out, that many countries in the developing world are moving towards a new debt crisis. Mozambique, Chad, Republic of Congo and Gambia are already unable to pay its debts and more countries will follow (Jubilee Debt Campaign, 2017). Jubilee Debt Campaign warns (2017) in its research that, "a new debt crisis has begun in impoverished countries (...) which could cause increasing poverty and declining public service provision, as happened in the 1980s and 1990s". The crisis originated in a lending and borrowing boom starting at the global financial crisis of 2008, followed by the crash in the price of commodity exports²¹. Most alarming is the appearance of vulture funds which are buying debt from impoverished countries. They specialise in buying debt when it cannot be repaid, then sue the government concerned for large profits once other creditors have agreed to cancel some of the debt (Jubilee Debt Campaign, 2017).

Mega-infrastructures provoke illegitimate, ecological and gender debt

Mega-infrastructure projects have grave social and environmental impacts. They are often responsible for illegitimate, ecological and gender debt. Many examples have been given in this report, but in reality the list of mega-infrastructure projects that provoke these and other debts is endless. Unfortunately, the study of specific cases and mobilization against responsible actors is mainly left up to civil society and critical voices from the media. The new global infrastructure agenda of mega-infrastructure projects leaves little space for them; for example to contribute to the development of alternative sustainable infrastructure plans. They have however a very important role in diffusing the ideas of debt and "other debts" to create a strong counter discourse that opposes the neoliberal discourse of the financial, economic and political elites.

²¹ Low interest rates in the western world attracted creditors as lending to impoverished countries meant that they could charge higher interest rates. Private creditors have begun to buy governments debt, for example, the amount in international bonds issued by sub-Saharan African governments increased from \$1 billion in 2011 to \$6.2 billion by 2014 (World Bank, 2015).

6. Do we need more infrastructure?

The answer is no. Or more precisely, not in the way in which the international elite is promoting it. In the past infrastructure was conceived as an essential service for the population not an asset for international finance. The investors' necessity for returns on infrastructure investments requires a constant stream of profit, which trumps the real needs of the population. This trend must be reversed; infrastructure should be designed to serve the needs of the population.

What alternatives exist?

In contrast to the promotion of mega-infrastructures, the concept of **infrastructures for everyday life** refers to physical, economic and social infrastructures that facilitate the development of daily life and quality of life for all. These infrastructures are thought taking into account our responsibility towards the planet and all its people including the work of caring for people and the environment²². For example, the city of Barcelona (Spain) is promoting an urbanism with a perspective of gender or also called **feminist urbanism** which aims to achieve a structural change in the pattern of urban planning and policies. Feminist urbanism stresses the importance of care, assuming that all people are dependent on each other and the environment and, therefore, care is seen as a collective responsibility (Valdivia, 2017). When it comes to infrastructure, the city prioritizes a network of accessible public transport, physically and economically, that connects with an ample pedestrian network. Furthermore it promotes the construction of public spaces with playgrounds for different ages, with fountains, vegetation, shade, and tables, public baths, etc. Furthermore Barcelona is promoting **green social public contracting**. That means that when contracting goods or services not only the economic or technical aspects of the products and services will be considered, but also their environmental and social impacts. The contracted firm has to fulfill ethic standards and respect human rights. In this sense, public contracting becomes a powerful instrument to influence companies that construct or operate infrastructure.

Citizen audits - a powerful tool

In the discussion on controversial mega-infrastructure projects, audits have resulted in a valuable analytical tool to examine the legitimacy of loans. On the one hand there are audits initiated by legal representatives (from jurisdictional institutions) or legislative representatives (from parliamentary institutions). These technical audits should be mandatory for mega-projects, and specially if they are related to misbehaviour or mismanagement. On the other hand, there are proposals for citizen audits. A citizen audit is an instrument or a process promoted to critically analyse policies of indebtedness carried out by a country's authorities as well as their impacts on the population. It does not only analyse financial data but offers a broader and deeper analysis that ranges from cuts in the fundamental rights and needs of citizens, to the impacts on the environment, the lack of transparency or the right of citizens to control those who govern them, and therefore actively participate in public affairs²³. A citizen audit is carried out by ascertaining the original terms of loans, how much interest has been paid, what the loan funds were used for, who borrowed the money and in whose name, and the role and identity of the lender. In fact, there are many practical examples of citizen debt audits, both in impoverished countries as well as in enriched countries.

²² http://www.juntadeandalucia.es/export/drupaljda/Modulo_4_UIG.pdf

²³ PACD. <http://auditoriaciudadana.net/quienes-somos/>

7. Policy recommendations

In order to control and stop the generation of illegitimate and other types of debts, the promoters, of mega-infrastructure projects such as public institutions, private companies or IFIs should:

1. Promote participatory decision making processes on infrastructure planning and frameworks. E.g. through binding consultations on large infrastructure projects taking into account the needs and desires of civil society, local communities, unions and other stakeholders.
2. Increase transparency in the planning process as well as in the financing of these projects so that we don't encounter 'invisible debts', projects that hide the real cost of the projects from national accounts and citizens themselves.
3. Conduct multi-criteria evaluations, taking into account social, environmental and gender aspects, not only economic valuation. Projects must be designed and selected with the aim of benefiting the entire society, guaranteeing public services and guaranteeing equitable access to infrastructure services, while avoiding ecological and gender debt.
4. Promote open and transparent management mechanisms for infrastructure projects e.g. through binding disclosure of financing instruments.
5. Governments must ensure security and the right to repair for any community impacted by a mega-infrastructure.
6. Decision makers should give preference to small-scale projects that respond to the real needs of the population, avoiding projects with no real demand and at too high cost.
7. Decision makers should recognize their co-responsibility in the creation of the new debt crisis in impoverished countries.
8. Decision makers should recognize their co-responsibility in the promotion of infrastructure financing. They should restrain from supporting financial instruments and mechanisms such as Project Bonds or PPPs that could provoke a new international financial crisis.

Regarding PPPs:

1. The real costs of PPPs should not be hidden. As PPPs are an expensive form of debt, responsible accounting practices should include the cost of PPP projects in national accounts. This should be recorded as public debt and, therefore, would be part of the analysis of debt sustainability.
2. The risk of contingent liabilities should be explicitly recognized in the planning phase in order to make a correct risk assessment before a project begins.
3. Governments should promote transparency and governance on PPPs, developing clear indicators to effectively monitor the benefits and potential impacts of PPPs, from the phase of project selection to the operational phase.

Regarding ECAs:

1. ECAs should offer total transparency during the processes of debt negotiations, and cancellations of bilateral debt e.g. by binding official reporting on the activities of their debt collection departments.
2. An international binding framework for ECAs should be promoted and implemented in order to restrain ECAs from supporting risky social and environmental impacting projects.

Regarding IFI's:

1. Should restrain from promoting mega-infrastructure projects and financialisation tools like PPPs, putting the real needs of the population in the centre of their activities.
2. Put more effort on a structural debt cancellation initiative.

Regarding civil society:

1. Mobilise against illegitimate, ecological and gender debt.
2. Learn and promote alternative solutions on finance infrastructure.
3. Demand transparency, participation and voice in decision making processes about new infrastructure.
4. Consolidate and spread the tools, concepts and processes that can help citizens understand and create a counter-discourse on debt and debt financialisation.

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