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THE POLITICAL ECONOMY OF WORLD HERITAGE

Enrico Bertacchini e Donatella Saccone

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The Political Economy of World Heritage

Enrico Bertacchini[*]   Donatella Saccone[†]

Abstract

The paper explores the main determinants affecting the nomination and selection process of World Heritage Sites. While World Heritage represents the most relevant cultural and natural assets for the humankind, little research has been conducted to understand the conditions influencing the process of sites inscription. Using panel data, we provide evidence on the institutional and economic conditions of countries which affect the composition of the World Heritage List. In particular, we test whether political factors, such as the involvement of countries in the World Heritage Committee, influence inscription of national heritage sites in the List. The paper contributes to the cultural economics literature by providing new insights on the political economy of conservation and promotion of heritage at the international level.

Keywords World Heritage Sites; UNESCO; International Political Economy; Panel Data
JEL Codes Z11, C23, F5

1   Introduction

Since the dawn of civilizations, humans have considered cultural heritage as a valuable endowment, whose appreciation often goes beyond cultures and national borders. The seven wonders of the ancient world were acknowledged as unique monuments or representations of the genius of humankind regardless the civilizations in which they originated. In a similar vein, the 1972 UNESCO Convention on World Heritage represents an international effort that seeks to encourage the identification, protection and preservation of cultural and natural heritage around

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[*]University of Torino, Department of Economics "Cognetti De Martiis", Via Po 53, 10100 Torino, Italy. Email: enrico.bertacchini@unito.it

[†]Department of Economics Cognetti de Martiis - University of Torino. Via Po 53, 10124 Torino.

the world considered to be of outstanding value to humanity. The World Heritage Convention is today the most successful international legal instrument for the protection of immovable heritage. It has since been ratified by 187 countries, which have placed 911 properties under its protection.

Arguably, from an economic viewpoint the World Heritage has global public good attributes. Because of their uniqueness and representativeness of different cultures and ecosystems across time and space, the sites inscribed in the World Heritage List have option and existence values which should be preserved for the sake of mankind as a whole and for future generations. However, the benefits to humankind accruing from the preservation of such treasures are strictly linked to the way in which World Heritage is defined and selected. As the process of inscription of World Heritage Sites is based on selection criteria agreed by the Convention parties, this may be influenced by several factors, which eventually affect the world heritage composition. First, many commentators have stressed the difficulty in defining the principle of outstanding universal value, as well as finding out proper criteria for sites inclusion that are not culturally-biased, notably towards western conceptions of heritage (Musitelli 2003). Second, while the goal of the World Heritage Convention is global, the initiative to submit new properties in the List lies with individual countries. Interestingly, this means that at any one time the pattern of world heritage may be a reflection of economic, institutional and political factors specific to each country. As a result, some states may be more active or have more influence than others in the World Heritage selection process.

For this reason, our paper aims to analyze the institutional and political determinants affecting World Heritage listing. To identify the effects on Sites inscription by states we use panel data covering the whole period of activity of the World Heritage Convention. In a first set of results we examine the relationship between countries characteristics relatively to their involvement in the World Heritage system and their nomination activity of heritage sites in the List. In a second set of results, we use data on individual sites that have been included or failed to be included in the World Heritage List. In this case, we test whether conditions in the political process leading to sites inscription, such as the countrys involvement in the selection decision-making, influence the probability of inscription of national heritage sites. Third, we inspect whether there exist imbalances between member states that may justify biases in the nomination and selection process.

While cultural economics has often focused on the economic nature of heritage goods (Rizzo & Towse 2002, Peacock & Rizzo 2008), so far little research has been conducted on World Heritage and in particular on understanding the conditions influencing the process of Sites inscription. In our knowledge, in the non-economic literature only Van der Aa (2005) extensively describes the conditions affecting the World Heritage nominations and the impacts of listing. His analysis provides

very interesting insights on the dynamics of World Heritage nomination process, but it is mainly based on a qualitative approach or descriptive statistics. In the economic literature, particular attention has been given to the role played by World Heritage Sites as tourist attractors (Yang et al. 2009). More interestingly, investigating the causal relationship between tourism specialization and economic growth of countries, Arezki et al. (2009) explore potential biases in the process of selection of the WHL when introducing the number of world heritage sites as an instrument for tourism specialization. Their robustness analysis suggests that the number of heritage sites per 100.000 inhabitants is not correlated with level of income, as well as other measures of the quality of institutions in the modern period. Conversely, Frey et al. (2011), using both cross-section and panel data, have analyzed how the influences of several factors affect the actual distribution of World Heritage Sites. Their findings show, not unexpectedly, that historical, cultural and natural determinants affect the presence and value across countries of heritage endowment that deserves to be included in the List. More interestingly, political and economic factors unrelated to the value of heritage play a significant role in the capacity of countries in obtaining more World Heritage Sites.

In order to deepen such evidence, our analysis more clearly unveils the determinants and potential biases behind the nomination and selection process of World Heritage Sites. First, using fixed effect panel estimation we are able to isolate the political and economic conditions which influence nomination activity by states from the size and quality of countries' heritage endowment, which is an obvious, but hard to measure determinant of the distribution of World Heritage Sites across countries. Second, a unique dataset with the information on successes and failures of World Heritage nominations by states adds more insights into the ability of countries to inscribe national heritage in the List.

The paper is divided as follows: Section 2 describes the World Heritage Convention, the process of sites inscription and the main trends in the World Heritage List; Section 3 illustrates a simple theoretical framework about states' behavior in proposing sites to the World Heritage List; Section 4 illustrates the empirical strategy and provides the econometric results, while Section 5 concludes.

2 World Heritage List: selection process and stylized facts

Originally, the Unesco World Heritage Convention of 1972 is rooted in the international recognition that protection of cultural and natural heritage of outstanding universal interest often remains incomplete at the national level, as countries lack the economic, scientific, and technological resources for preservation. The imple-

menting mechanism adopted by the Convention for identifying heritage sites of world status and place them under its protection is based on the formulation of the World Heritage List.

The List consists of cultural, natural and mixed properties of "outstanding universal value", but in order to define such ambiguous concept ten criteria have been devised. Sites can be included in the list if satisfy at least one of the criteria. Six criteria refer to Cultural, and four to Natural Sites. The former address masterpiece of human creative genius or reflect exceptional testimony of cultures and civilizations such as human settlement, building, architectural ensemble or landscape, or events and living traditions related to immovable heritage. The latter refer to superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance, the most important and significant natural habitats for insitu conservation of biological diversity and outstanding examples of major stages of earth's history or ecological and biological processes.

The nomination process lasts at least eighteen months and relies on the initiative of the state parties, which submit proposals for their heritage sites to be included in the World Heritage List. Experts of two advisory bodies, respectively ICOMOS for Cultural Properties and IUCN for Natural Properties, then evaluate the nomination report, which is eventually sent to the World Heritage Committee for the final decision of inclusion of the heritage site in the List. Rejection can occur because the site does not meet the outstanding universal value condition, lacks sufficient protection of the heritage site by the national authority, or there have been procedural reasons in the nomination process (Strasser 2002).

While the World Heritage Convention is recognized as one of the most successful international treaties based on a proactive approach by Member States (UNESCO 2007), it is not perfectly clear what are the incentives to join the Convention and inscribing heritage sites in the List. Having national heritage sites with World Heritage recognition does not guarantee greater protection of or additional resources to the enlisted properties. For instance, the World Heritage Fund is about 4 million US$ per year, a sum insufficient to cope with the growing needs and international assistance requests (Bertacchini et al. 2011). As a result, the protection of World Heritage properties mainly rests on national conservation programs and the benefits of having sites with world heritage status only accrue in forms similar to a club good (Buchanan 1965). Countries may thus benefit from World Heritage by signaling the quality of their cultural and natural properties, attracting further resources for heritage protection or marketing their world heritage sites as tourism destinations (Johnson & Barry 1995).

The decision to leave to member states the initiative for proposing sites in the List has led to two main effects. First, World Heritage is not a static collection of national properties of outstanding value. On the contrary, the number of World

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Heritage Sites has grown over time, as new countries have ratified at different stages the Convention and have brought new heritage sites worth of consideration. The inscription activity by member states has continued at a sustained pace, with an average of 30 sites inscribed every year, but at a decreasing marginal rate. As shown in Figure 1, the average number of new sites inscribed per country was 0,4 or greater in the first decade of the Convention, while it has decreased under 0,4 new sites per country from 1988 onward.

Figure 1: Average number of sites inscribed per state
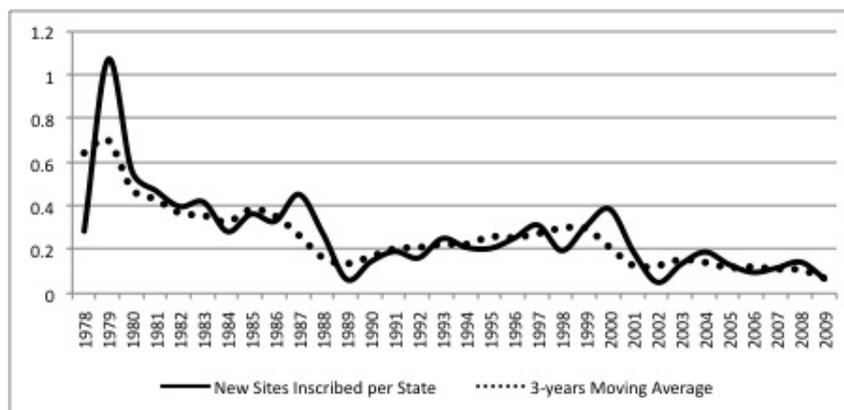
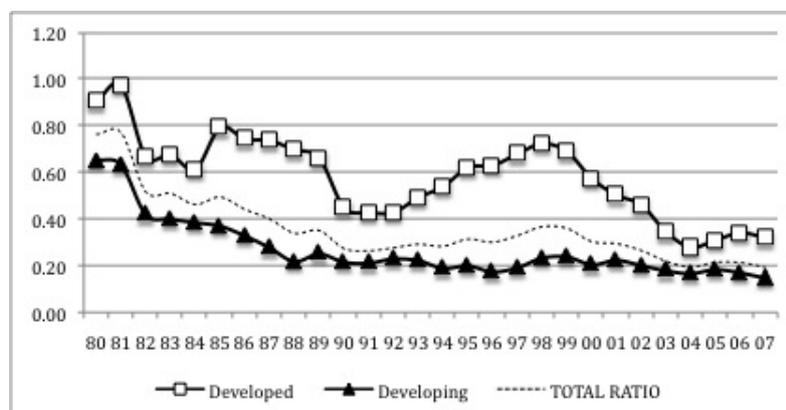Source: Elaboration on UNESCO data.

Second, the World Heritage List is recognized to be unbalanced in the type of inscribed properties and in the geographical areas of the world that are represented (Rakic 2007). For instance, the great majority of inscribed properties are cultural sites and most of world heritage is located in developed regions of the world, in particular in Europe and North America. While it can be contended that analyzing imbalances according to the spatial distribution of properties across states is only one point of view, Frey et al. (2011) point out that even considering the number of sites according to population, area and income unit of countries does not lead altogether to an equal distribution of World Heritage.

In order to rectify some of the representativeness gaps, since 1994 the Global Strategy for a Balanced, Representative and Credible World Heritage List was adopted. The World Heritage Committee has suggested and implemented a number of measures to add new categories and slightly modify the criteria for sites selection in favor of unrepresented heritage expressions, or limit both the nomination capacity of states and the number of examined proposals. These actions are clearly to favor nominations from unrepresented parts of the world, such as Africa or Asia and the Pacific, where the significance of places often lay not in monu-

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mental structures or heritage sites are younger as far as the date of construction is concerned (UNESCO 2007). However, the goal of a balanced and representative selection is far from having been achieved. For instance, considering the new categories of cultural landscapes, modern twentieth century heritage, industrial heritage, or prehistoric heritage, Europe has benefited most from the opportunity to nominate sites in these categories (Van der Aa 2005).

These shortcomings suggest that, albeit the measures undertaken, imbalances in the List may derive from other factors affecting the World Heritage system. For instance, the nomination activity by countries is likely to affect the number of sites inscribed in the List. As shown in Figure 2, the yearly nomination activity of developed countries has always been greater than that of developing countries.

Figure 2: Average number of new sites proposed per member states according to Income level, 5-years Moving Average
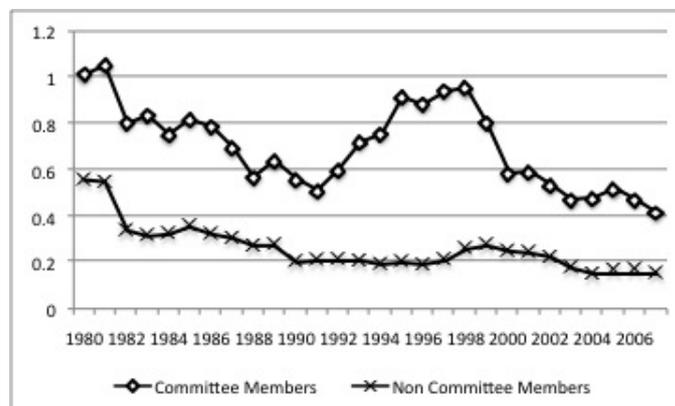

Source: Elaboration on UNESCO data.

Further, countries that actively participate in the World Heritage Convention are often also represented on the World Heritage Committee, which comprises twenty-one member countries, in charge for about 4 years. Although some commentators have noticed that in many cases the Committee has followed advisory bodies' recommendations (Pressouyre 1996, Van der Aa 2005), evidence suggests that being member of this governing body may nevertheless influence the nomination and selection process. Figure 3 clearly shows that members of the World Heritage Committee have always proposed an average number of sites greater than those that were not members.

According to the text of the Convention, the composition of the Committee shall ensure an equitable representation of the different regions and cultures of the world. However, Figure 4 points out that after the first period of coming into force

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Figure 3: Average number of new sites proposed per member states according to membership to the Committee, 5-years Moving Average

Source: Elaboration on UNESCO data.

of the Convention, the capacity of developed countries to hold seats in the World Heritage Committee has greatly exceeded that of developing countries.

As a result, institutional and economic conditions may influence the capacity of a country to participate in the World Heritage system. Political power may be used to lobby for inclusion of heritage sites, regardless any objective evaluation of the quality and outstanding universal value of heritage. Beyond this rent-seeking view, the development level of a country may be positively related to the number of Sites inscribed because arguably in the richest societies more resources can be devoted to heritage preservation.

3 A Theoretical framework of World Heritage Listing

In order to better analyze states behavior in proposing sites in the List, we develop a simple theoretical framework that allows us to set hypotheses that can be tested using the data we have collected.

Let assume state i owns a stock of heritage endowments and q_i denotes all characteristics of heritage that are potentially observable and used in the decision to include or reject a heritage site in the List. For expositional ease, we treat q as a one-dimensional variable. Heritage sites in the stock are distributed according to the variable q_i. Let $\bar{q}$ be the threshold level defined by the ten criteria expressing the outstanding universal value (OUV) according to which a site is worth to be

Figure 4: Probability for member states of being in the World Heritage Committee according to income level, 5-years Moving Average
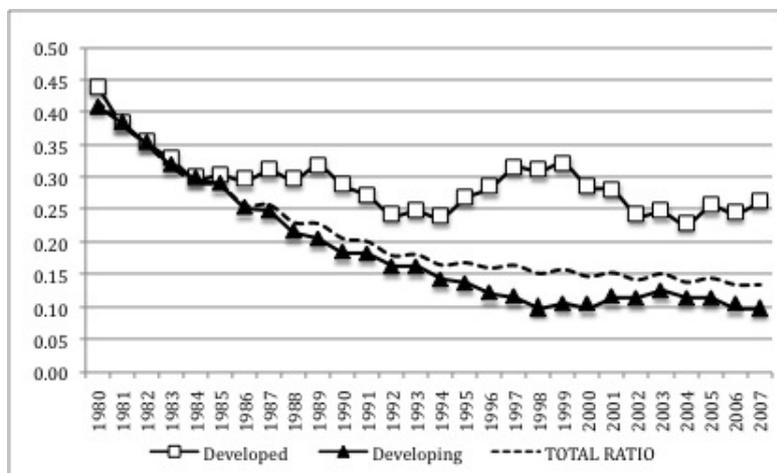
Source: Elaboration on UNESCO data.

included in the List. Each state has to choose how many heritage sites to propose in the List. For simplicity, we assume that when a state proposes a site for inclusion it picks it from the stock without prior knowledge of its characteristics. Having a site inscribed in the List provides a payoff of B, that for simplicity is equal for all sites. On the contrary, if a site proposed is not inscribed the payoff is zero. Further, nominating sites to the List imposes a cost $c(n_i)$ with $c(0) = 0$, $c' > 0$ and $c'' > 0$.

The utility function for a state i can be written as

$$U(n_i) \quad = \quad n_i p_i B - c(n_i) \tag{1}$$

where $p_i = p(q_i > \bar{q}) = F(q_i - \bar{q})$ represent the probability that the characteristics of proposed sites satisfy the OUV requirements. It is easy to see that p_i is decreasing in $\bar{q}$, meaning that the higher are the requirements for being selected the lower the probability that nominated sites are included in the List. A state chooses its optimal nomination activity n_i^* such that the expected benefits from nominating sites equal the cost of nomination

$$U'(n_i^*) \quad = \quad p_i B - c'(n_i^*) \tag{2}$$

The equation indicates that the lower the marginal cost the higher the nomination activity of the state and the higher the probability that heritage sites are

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accepted the higher the nomination activity by the state. This simple theoretical framework allows us to draw some interesting implications and hypotheses about states' behavior within the World Heritage system. First, the nomination activity by states is affected by the marginal cost of proposing sites, even if the stocks and characteristics of heritage are equal. If $c'_i < c'_j$ then $n^*_i > n^*_j$. Arguably, differences in the cost of nomination depend on several conditions. For instance, richest countries may devote more resources to preserving heritage and preparing nominations or poorer countries may face a higher opportunity cost in assigning to sites heritage status. At the same time, the length and level of participation in the World Heritage system may lower the cost of nomination because the inherent learning process improves the ability of countries in dealing with the nomination procedures. These arguments lead to the following hypothesis:

H1a: Given an equal stock of heritage endowments and equal characteristics of heritage sites, richer countries have a greater nomination activity than poorer ones;

H1b: The longer the membership of a country to the World Heritage Convention and the greater its participation to the World Heritage system the higher its nomination activity.

Second, the presented framework assumes that states take $\bar{q}$ as exogenously defined by UNESCO. However, states may use their political power to lobby for inclusion of their own sites, influencing the evaluation of the quality of heritage. In particular, when states seat in the World Heritage Committee they may bring pressure on other Committee members to relax the quality requirements to $\bar{q}$ for their heritage endowments. If $p^C_i = p(q_i > \bar{q}_C)$ is the probability of having a site inscribed in the List when the state in the Committee and $\bar{q}_C < \bar{q}$, then the probability of having accepted sites in List will increase ($p^C_i > p_i$) and consequently the optimal level of nomination activity ($n^*_{iC} > n^*_i$). This leads to the following hypothesis:

H2: Given an equal stock of heritage endowments and equal characteristics of heritage sites, States in the World Heritage Committee have both a higher probability of having accepted sites in the List and a higher nomination activity.

4   Econometric Analysis

In this section we test the hypotheses on the economic and political determinants affecting the World Heritage nomination process. First, we test whether economic and institutional factors affect the nomination capacity of member states. Second,

we use information on successes and failures of World Heritage nominations by countries to detect potential biases in the selection process. Finally, we analyze if economic and institutional factors influence the likelihood of being in the World Heritage Committee.

4.1   Nomination and selection process

To analyze the nomination capacity by countries we combine information on the number of sites proposed each year by member states with information on the economic conditions and institutional factors of countries within the World Heritage system. The first set of results use an unbalanced panel data of 131 countries covering the period 1978-2008. One of the main challenge in estimating the determinants of nominations activity is to isolate the effect of the size and quality of heritage endowment within each country's borders, which arguably may affect the capacity of states to nominate heritage sites in the List. Unlike the cross-country estimation, the panel data form allows us to indirectly take into account the heritage endowment of each country. Since this is difficult to measure and to model as an independent variable, we typify its effect by considering it an unobserved variable differing between-country but constant within-country. As a result, we use fixed effects estimations so that the effects of the regressors are considered keeping constant cultural and natural endowment. We estimate:

$$y_{it} \;\; = \;\; X_{it}\beta + \gamma C_{it} + \delta Member_{it} + \lambda Member_{it}^2 + \theta WH_{i,t-1} + \alpha_i + \varepsilon_{it} \quad (3)$$

where y_{it} is the number of sites proposed by state i at time t. We do not differentiate between cultural and natural sites as we expect that political and institutional factors have the same influence on both types of heritage properties. C_{it} is the dummy variable of state i being in the World Heritage Committee at time t. X_{it} is a set of time-varying controls at the country level, namely the *GDP per capita* and *Population* at time t. These variable address the economic power of countries. $Member_{it}$ indicate the number of years a country has been member of the World Heritage Convention and we use a quadratic relation in order to detect either decreasing or increasing marginal effects from the non linearity of learning process expressed by this covariate. Further, $WH_{i,t-1}$ is a set of additional covariates which measures at time $t-1$ other dimensions of activity of a country in the World Heritage System and may affect the nomination capacity at time t. We choose the number of sites inscribed in the previous year ($SitesInscr_{i,t-1}$) and the total number of sites inscribed by state i ($WHSites_{i,t-1}$).

Because the dependent variable only takes natural numbers we use as appropriate technique count data models, namely the negative binomial regression, which

additionally copes with overdispersion of data[1].

Table 1 presents this first set of results. Both the coefficients of $GDPpercapita$ and $Population$ are positive and highly significant, confirming Hypothesis H1a. The size of the coefficients can be interpreted by exponentiating the estimated coefficient to get the so-called incidence rate ratio (IRR); that is, the factor change in the expected count of Sites nominated for a unit increase in the independent variable. In estimate (1), $GDPpercapita$ has, for instance, an IRR $= e^{0.057} =$ 1.0586, which means that an increase of 1.000 USD in GDP per capita (i.e., one unit in our scale) leads to a relative increase of the expected number of Sites nominated of IRR 1 = 5.86 percent. As a result countries with a greater economic size could have greater nomination capacity. At the same time, the resources available for the preservation and promotion of heritage could be larger.

More interestingly, being in the World Heritage Committee greatly affect the nomination activity of a country. The coefficients for this variable are highly significant and vary between 0,292 (eq.1) and 0.519 (eq.5). This means that being in the World Heritage Commission increases the nomination activity by a range from 33,9 percent to 68 percent. By contrast, the results for the length of membership to the World Heritage Convention are more ambiguous. The coefficients show a negative effect that seems to reject hypothesis H1b. However, the estimates for this covariates are in many cases not significant, providing no clear evidence for learning processes through this channel.

Further, if we consider the number of sites inscribed up to the previous year by a country ($WHsites_{it-1}$ we find that this variable is negatively related to the number of sites nominated in a given year. As one could expect, the stock of heritage endowment owned by a state is finite and the more Sites have been already been inserted in the List, the less the nomination capacity of a country. Conversely, controlling for the number of sites successfully inscribed in the previous year ($SitesInscr_{it-1}$), the coefficient is positive and highly significant. This means that the nomination activity of a state increases if other sites of its heritage were already accepted in the previous year. This counterintuitive result may be explained by considering that position in the World Heritage Committee lasts 4 years. For instance, from a deeper inspection of data results that states tend to cluster successful nominations in their terms within the Committee.

Finally, we test also the interaction between Committee and the level of GDP per capita in order to detect divergent effects of income level within and outside the Committee. As shown in eq. 4 and 5, the coefficients for the interaction term is negative (ranging from -0.016 to -0.014) while the coefficient for $Committee$

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[1]As for count data models, we tested also Poisson regression. However, a comparison of the residuals, suggests a variance greater than the expected value, which the Poisson model is not able to take into account.

Table 1: Panel Estimation on the determinants of World Heritage nomination activity by states

Dependent variable: Sites nominated

	(1)	(2)	(3)	(4)	(5)
GDP per capita (1.000 USD)	0.057***	0.046***	0.037***	0.040***	0.054***
	(0.011)	(0.012)	(0.011)	(0.011)	(0.013)
Population (1 million)	0.008**	0.012**	0.007*	0.007***	0.010**
	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)
Memberyear	-0.03*	-0.023	-0.029*	-0.029*	-0.018
	(0.017)	(0.018)	(0.018)	(0.017)	(0.018)
Memberyear sq.	-0.0003	0.0002	0.0003	0.0002	0.0002
	(0.0006)	(0.0006)	(0.0006)	(0.0006)	(0.0006)
Committee	0.292***	0.295***	0.262***	0.519***	0.519***
	(0.100)	(0.100)	(0.100)	(0.166)	(0.167)
WH Sites lagged		-0.015*			-0.023**
		(-0.158)			(0.010)
Sites inscribed lagged			0.120***		0.133***
			(0.034)		(0.034)
Committee*GDP per capita				-0.014*	-0.016*
				(0.008)	(0.008)
Constant	-0.527**	-0.601***	-0.591***	-0.563**	-0.747***
	(0.225)	(0.230)	(0.224)	(0.228)	(0.232)
Observations	3129	3129	3129	3129	3129
Log likelihood	-1673.40	-1672.07	-1668.21	-1671.97	-1664.12

Note: Standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Panel data refer to countries of the World Heritage Convention for the period 1978-2008 . Source: http://whc.unesco.org/en/list, accessed on 30.8.2010. GDP per capita is expressed in PPP at 2005 constant prices. Source: World Bank Development Indicators.

increases (0.519). This result clearly indicates that being in the Committee has a far greater importance for nominating sites. While income level is still important for states outside of the World Heritage Committee, difference in income level are leveraged out for countries in Committee.

After having explored the nomination activity, we turn on the selection process and the probability for proposed heritage sites of being successfully inscribed. For this second set of results we use a specific dataset which combines information on all the individual nominations made by countries for the period 1978-2009, the success or failure of the proposed sites as to being inserted in the List and other information on the economic and institutional conditions of the proponent country. This part of the analysis is useful to detect potential bias in the selection process. As we expect, when proposing sites, states do not exactly know the probability of having this site accepted in the List. However, economic and institutional conditions may affect the likelihood of having a site inscribed. In this case, we estimate:

$$y_{jit} = X_{it}\beta + \gamma C_{it} + \delta Member_{it} + \lambda Member_{it}^2 + \theta NewSites_t + \mu SitesNom_{it} + \epsilon_{it} \quad (4)$$

where y_{jit} is a dihcotomic variable expressing whether site j proposed by country i at time t has been successfully inscribed or not in the List. In addition to X_{it}, C_{it} and $Member_{it}$, which are specified as in equation 3, we consider two other control variables. First, $NewSites_t$ denotes the total number of heritage sites inscribed in the World Heritage List at year t. Second, $SitesNom_{it}$ is the total number of sites nominated by country i at time t. As the number of new sites added each year to the List is not fixed, we expect that the greater the total number of sites accepted in the List, the higher the relative probability for site j to be inscribed. At the same time, the number of sites proposed each year by country i may negatively affect the likelihood of having its sites inscribed. Although for the sake of simplicity we have not considered in the theoretical framework a potential negative relation between n_i and p_i, it is quite easy to introduce it maintaining the main hypotheses we are testing in the empirical part[2]. Indeed, as the nomination and selection process is based on a lobbying activity, proposing too many sites for inclusion in the same period risks to be a not credible or acceptable strategy for the other constituents.

Table 2 presents the estimated coefficients and marginal effects of the Probit relatively to the standard model and to an additional regression with a dummy variable for European countries. As shown in both regressions 6 and 7, it is more difficult to ascertain the impact of a country's economic power on the likelihood

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[2]For instance, if $p_i = p(q_i, \bar{q}, n_i)$ and $\frac{\partial p_i}{\partial n_i} < 0$, it is easy to show that the optimal level of nomination activity n_i^* decreases.

Table 2: Probit Estimation on the probability of having a site accepted in the World Heritage List

Dependent variable: Site inscribed = 1, Site not inscribed = 0

	(6)		(7)	
	Estimate	Marginal Effects	Estimate	Merginal Effects
GDP per capita (1.000 USD)	-1.02e-12	-3.22e-13	-1.90e-13	-5.96e-14
	(1.69e-12)	(0.000)	(1.72e-12)	(0.000)
Population (1 million)	0.0037**	0.001**	0.005***	0.001***
	(0.001)	(0.0005)	(0.001)	(0.0005)
Memberyear	-0.078***	-0.024***	-0.081***	-0.025***
	(0.024)	(0.007)	(0.024)	(0.007)
Memberyear sq.	0.0023***	0.0007***	0.0023***	0.0007***
	(0.0008)	(0.0002)	(0.0008)	(0.0002)
Committee	0.468***	0.141***	0.445***	0.133***
	(0.097)	(0.027)	(0.097)	(0.027)
NewSites	0.023***	0.007***	0.023***	0.007 ***
	(0.004)	(0.001)	(0.004)	(0.001)
Sites Nominated	-0.108***	-0.034***	-0.127***	-0.039***
	(0.026)	(0.008)	(0.027)	(0.008)
Europe			0.272***	0.082***
			(0.105)	(0.030)
Constant	0.488**		0.452**	
	(0.191)		(0.192)	
Observations	1004		1004	
Log likelihood	-541.83		-538.46	
Pseudo R2	0.056		0.062	

Note: Standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Data refer to heritage sites and countries of the World Heritage Convention for the period 1978-2008. Source: http://whc.unesco.org/en/list, accessed on 30.8.2010. GDP per capita is expressed in PPP at 2005 constant prices. Source: World Bank Development Indicators.

of having a heritage site inscribed, as the coefficient of $GDPpercapita$ is now not significant and the marginal effect of $Population$ has a significant but moderately positive effect. Conversely, the coefficients of the $Committee$ are positive and highly significant, confirming hypotheses H2, that is being in the Committee increases the probability of having sites inscribed in the List by 14 percent (eq. 6). Further, the length of membership in the World Heritage Convention has a negative effect, meaning that the longer a country stays in the World Heritage System, the lower the probability of having a site included in the List. Such unexpected result may be explained only considering that the majority of members states tend to submit more heritage sites that are worth of inclusion in the first years of membership in the World Heritage Convention. With regard to $NewSites$ and $SitesNominated$, as expected, the coefficients are significant and have respectively a positive and negative value.

In regression 7, we further verify the impact of being a European country on the probability of having heritage sites accepted in the List, which leads to an increase of 8 percent. Because the level of income does not significantly affect the dependent variable, this result suggests that European countries may take advantages through other non economic or political factors, in particular through the selection criteria adopted by UNESCO for sites' inscription. For instance, one of the main criticism to the World Heritage List is that the criteria for inclusion are culturally-biased, notably towards western conceptions of heritage.

4.2 Determinants of being in the World Heritage Committee

So far, we have tested the hypotheses on the economic and political determinants affecting the World Heritage nomination and selection process. One of the most clear results is that being in the World Heritage Committee does affect both the nomination activity of states and the probability of having sites included in the List. This result, however, does not lead to argue about the existence of potential biases in the nomination and selection process. Rather, it shows a common pattern by states taking advantage of their political power within the World Heritage system. Because the World Heritage Committee undertakes each year the final decision for the inclusion of heritage sites in the List, potential discrimination in the nomination and selection process may only come out if the participation in the World Heritage Committee is biased.

For this reason, we test whether economic or political conditions characterizing the participation of countries in the World Heritage system have an impact in the likelihood of sitting on this body. For the likelihood of being in the World Heritage Committee we estimate the following equation:

$$y_{it} = X_{it}\beta + \delta Member + \lambda Member_{it}^2 + \phi WHSites_{i,t-1} + \gamma States_t + \mu ComT_{i,t-1} + \theta UN_{i,t-1} + \epsilon_{ij} \quad (5)$$

where y_{it} is the dummy variable of state i being in the World Heritage Committee at time t, while X_{it}, $Member_{it}$ and $WHSites_{it}$ are defined as in the other equations. In addition, we consider another set of variables. First, $States$ represent the number of members belonging to the World Heritage Convention at time t. We expect that as the number of states participating in the World Heritage system increases, the probability of being in the Committee declines. Second, $ComT$ expresses the number of years elapsed since the last time a state was elected in the Committee (or from its ratification to the Convention if it has never been elected before). This variable tries to capture if there is turn-over in the World Heritage governing body.

Finally, to detect potential political clout at international level affecting membership in the World Heritage Committee we use the variable UN, which indicates whether the country has been in the UN Security Council at time $t-1$. Additionally, we test also the cumulative numbers of years a state has been in the UN Security Council since it became a member of the World Heritage Convention ($UNYEAR$). In this case, there is no clear evidence on the expected effects, mainly because of differences in the variables considered by previous researches. For instance, Arezki et al. (2009) do not find any correlation between World Heritage designations and voting coincidence of states with the G7 countries at the UN Security Council. By contrast, Frey et al. (2011) found that in cross-section regressions the number of years spent as member of the UN Security Council leads to a higher probability of having a larger number of Sites in the List. However, with Panel estimations, their results are more ambiguous as only being a rotating member in a given year significantly increases the number of sites inscribed.

Table 3 presents the results of panel Logit regressions with both Conditional Fixed Effects and Random Effects. The former specification allows to take into account constant specific country effects, but restricts the sample to countries which have been at least once in the Committee. The latter, does not capture country fixed effects, but it allows to consider the whole sample of observations by member states[3]. The results suggest that the probability of sitting in the World Heritage Committee is strongly affected by political factors within the World Heritage system.

Both the coefficients of $GDPpercapita$ and $Population$ are positive and highly significant, indicating that countries with greater economic resources and power have an higher probability to be elected in the World Heritage governing body.

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[3]For a discussion of the pros and cons using different binary choice models in panel data see Greene (2003), chapter 21.

Table 3: Fixed effect Panel Probit Estimation on the probability of being member of the World Heritage Committee

Dependent variable: Member of the World Heritage Committee =1, 0 Otherwise

	(8)	(9)	(10)	(11)
	Logit, FE (Conditional)	Logit, RE	Logit, FE (Conditional)	Logit, RE
GDP per capita (1.000 USD)	0.117***	0.069***	0.114***	0.067***
	(0.034)	(0.012)	(0.034)	(0.011)
Population (1 million)	0.095***	0.032***	0.093***	0.031***
	(0.028)	(0.004)	(0.029)	(0.005)
Memberyear	0.376***	0.189***	0.377***	0.194***
	(0.100)	(0.042)	(0.100)	(0.042)
Memberyear sq.	-0.007***	-0.005***	-0.007***	-0.005***
	(0.001)	(0.001)	(0.001)	(0.001)
WH Sites Lagged	-0.043**	-0.014	-0.045**	-0.018
	(0.018)	(0.013)	(0.019)	(0.015)
States	-0.044***	-0.013**	-0.045***	-0.013***
	(0.015)	(0.005)	(0.015)	(0.005)
ComT Lagged	-0.074***	-0.128***	-0.074***	-0.127***
	(0.012)	(0.013)	(0.012)	(0.013)
UNLAG	0.014	0.146		
	(0.202)	(0.186)		
UNYEAR			0.012	0.020
			(0.032)	(0.020)
Constant		-1.527***		-1.453***
		(0.385)		(0.388)
Observations	1587	3380	1587	3380
Log likelihood	-740.37	-1010.57	-740.30	-1010.49

Note: Standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Panel data refer to countries of the World Heritage Convention for the period 1978-2008 . Source: http://whc.unesco.org/en/list, accessed on 30.8.2010. GDP per capita is expressed in PPP at 2005 constant prices. Source: World Bank Development Indicators.

While the length of membership in the World Heritage Convention seemed to not lead to a significant impact in the nomination activity or even to a negative effect in the sites' selection process, now it has a clear-cut positive but decreasing marginal effect in the likelihood of being in the Committee. Conversely, the number of World Heritage SItes owned by a country ($WHSites_{i,t-1}$) has a negative coefficient, that is nevertheless significant only with the conditional fixed effects model.

Further, the variables $States$ and $ComT$ add insights on the political competition among countries to enter in the World Heritage Committee. As expected, the higher the number of member states the tougher the competition and the lower the probability to have a seat in the governing body. However, the negative and significant coefficient of $ComT$ implies that the level of turn-over among states in the Committee is low. As the value of the coefficients for this latter variable are always greater than the value of the coefficients of the former, this second effect is predominant, hindering turn-over and political competition among countries. Finally, both the covariates referring to states' involvement in the UN Security Council are not significant, leading to absence of evidence for potential international political clout affecting membership in the World Heritage Committee.

5   Conclusion

The World Heritage Convention has been for more than thirty years the most successful international legal instrument to protect and preserve cultural and natural heritage sites worldwide. However, the Convention has also gained attention at the international level for imbalances concerning the distribution of World Heritage sites across countries and the selection of heritage sites worth to be included in the List. Arguably, the distribution of World Heritage depends on historical, cultural and natural factors. At the same time, countries have incentives in lobbying for inclusion of their national heritage sites in the List for other economic and political reasons, regardless any objective evaluation of the quality and outstanding universal value of heritage.

Our analysis has focused on the influence of economic and political conditions on the inscription of heritage sites in the World Heritage List. By using panel data on countries' activity within the World Heritage System and a unique dataset on individual sites that have been or failed to be included in the List, we have focused on both the nomination activity and on potential biases in the selection process of proposed sites. Our results suggest that there exist some crucial factors within the World Heritage system which may have led to an unbalanced distribution of world heritage sites. First, having a seat in the World Heritage Committee has a strong and significant impact in both the nomination activity by states and in

the likelihood of having a site inscribed. In turn, participation in the Committee is strongly influenced by the economic and political power countries have at the international level as well as by the level of their involvement in the World Heritage Convention, expressed by years of membership.

Second, the criticism concerning a cultural bias of the criteria used for inclusion of sites in the List is confirmed by our results as European sites have a slightly greater probability of being inscribed, even after controlling on the economic characteristics of countries and on the participation in the World Heritage Committee.

As our analysis refers to the whole period of activity of the World Heritage Convention, the political and economic factors we have highlighted may have affected the nomination and selection process with different magnitude along the time. Crucially, from 2003 onwards, after the Global Strategy for a Balanced, Representative and Credible World Heritage List, member states have agreed on a set of measures which limits both the nomination capacity of states and the number of examined proposals. While there are still few data available to provide a clear evidence on the effects of these measures, more attention should be given to the influence of states in the World Heritage Committee and to the rules which regulate the turn-over within this governing body.

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