

Francesca Salvo,  
Massimo Zupi,  
Manuela De Ruggiero

*Dipartimento di Ingegneria Civile,  
Università della Calabria*

E-mail: [francesca.salvo@unical.it](mailto:francesca.salvo@unical.it)  
[massimo.zupi@unical.it](mailto:massimo.zupi@unical.it)  
[manueladeruggiero@virgilio.it](mailto:manueladeruggiero@virgilio.it)

*Keywords: public real estate, unitary  
development plans, highest and  
best use, value of transformation,  
transformation matrix*

## **The valorization of public real estate. A first outcome of the experiences in progress and a methodological proposal**

In a negative macroeconomic environment, the public real estate can contribute to a reduction of public debt.

The approaches usually used in urban planning show a structural weakness related to the appraisal method used to estimate the value of the assets involved in territorial planning.

Accordingly the present work proposes a new estimating method that examines the possible destinations (and therefore the transformation value) of each property involved in the unitary intervention, also considering the relations of complementarity.

The matrix of transformation method based on the Highest and Best Use, allows for leading the choices of spatial planning taking into account the effect generated by the virtuous “network” that makes the greater overall value the sum of its parts.

---

### **Introduction**

In a negative macroeconomic environment, exacerbated by the European sovereign debt crisis, the efficient use, the enhancement and the disposal of public real estate assets can contribute to the sustainability of public debt and compliance of national debt-to-GDP ratio with new European budget rules (Screpanti, 2012). In this context, the Italian Government has outlined a political strategy based on a multiannual plan and redevelopment and disposals of real estate assets. If it is obvious, therefore, how the public real estate can contribute to the reduction of public debt, through enhancement and disposal operations, as well as the consolidation of the primary surplus through measures such as the revision of current expenditure, it is unthinkable to limit the reasoning of this subject exclusively to financial aspects.

The enhancement of public real estate must necessarily play a key role in the process of modernization of urban areas. Management policies of public goods cannot be a lever to encourage savings, stimulate regeneration of the urban fabric and increase, as a result, the quality of life of citizens.

Starting from this premise, the article is structured in four parts.

In the first part, we proceed to rebuild the reference legislative framework, which has undergone numerous and significant updates over the past decade.

In the second part, a review of the main operational experiences, describing procedures, methodologies, stakeholders and first results is presented.

Then a reflection on how to approach the topic, identifying a structural weakness in the lack of an estimated complex approach is provided

The use of simplistic methodologies (single-parameter estimation, using real quotes, etc.) or conventional estimates, especially when operating in an administrative context – parent company, is likely to produce an overvaluation/undervaluation of assets, resulting in failure of the valorisation of public goods.

The study essentially seeks to identify a methodology to estimate the complexity of development processes, providing the necessary support for strategic choices that should drive the reuse of public goods.

The estimation of public goods is not possible without careful examination of the different potential for transformation and repurposing; just finding the right practical reason of the estimate, the criterion of value of transformation, can lead to routinely estimate shared results with the use of methodologies that take into account the income aspect connected to the heritage processes themselves.

### **The reference framework**

Since December 2006, with the Finance Act 2007 (Law 296 of 27.12.2006), up to the most recent actions of the so-called Monti Government spending review the, a number of legislative initiatives aimed at enhancing the public estate have followed.

In particular, the 2007 budget introduced Unitary Development Plans (inclusion of paragraph 15 bis to art. 3 of law n. 410 of 23.11.2001 on the adjustment of public housing management) understood as enhancement processes of a plurality of public estates which can stimulate local development actions, together with territorial development,. As part of these programs, the discovery of susceptibility evaluation of immovable property through public concession of use or location, as well as the allocation of functions of interest in social, cultural, sports, recreational, education, promotion of solidarity and support to youth policy, and equality policy, are identified as priority items.

The same law 410/2001 had already introduced concessions of exploitation through which real property owned by the State may be granted or leased to private individuals, against payment, for the purpose of retraining and retooling through recovery actions, restoration, renovation, even with the introduction of new destinations of use for economic activities or service activities for citizens. Compensation mechanisms are provided for local authorities which cooperate in the enhancement of public real estate adjusting its planning tools (up to 15% of the value of the proceeds from the real estate transaction).

Subsequently, the budget for 2008 (law 244 of 24.12.2007), by article 1 paragraph 313 to 319, proposes an expansion of the scale of intervention Enhancement Unit programs and an acceleration of implementation, assigning the State Property Agency with the responsibility for identifying areas of national interest where there are real estate owned by the State and by public entities to promote, in each area, in a unified program of enhancement. The entirety of the development

programmes is the valorisation plan of public assets for the promotion and development of local systems with the aim of enabling significant local development processes through the recovery and reuse of public estates, in coherence with the aims of territorial development, economic and social development and with the objectives of sustainability and territorial and urban quality.

The Law 33 of 06.08.2008, lays down the obligation for all public administrations to commence the process of reorganization, management and enhancement of their estate, through the establishment of the “plan of real estate exploitation and alienation”. Each Institution must therefore identify the individual real property within the territory of competence, which is not instrumental to the performance of their duties, suitable to enhance or disposal. The inclusion of real estate in the plan determines the resulting classification as assets available and specifically target features.

Articles 33 and 33-bis of Legislative 98/2011 introduce new Financial and corporate vehicles to increase the economic and social value of Public property assets. The art. 33 provides for the creation of integrated real estate investment funds, with the aim of increasing the efficiency of the processes of development and exploitation of property assets owned by the State, regional or local authorities, other public authorities and by institutions which they supervise. The art. 33-bis recognizes the State Property Agency with the clear and defined role of promoting appropriate initiatives for the exploitation, processing, management and sale of real estate, which is not only State-owned and supervised institutions, but above all territorial authorities. Such a proactive role of the State Property Agency translates as the ability to act as a “Facilitator” in the construction of the conditions of institutional consultation among all those public entities interested in developing their real estate system, within the framework of a joint project for development, enhancement and development income, where previously feasibility conditions of individual initiatives have been verified. This inter-institutional agreement could result in the formation of a unique structure for implementation of the initiative, which could even assume, without new or increased costs for public finance, the form of company, Consortium, or real estate fund.

The art. 27 of Decree n. 201/2011 introduces, always within the law no 410/2001, unit programmes of valorization of the territory (Puvat), which represent the evolution of a process of revision and systematic implementation of governance tools for better use of publicly owned real estate, in close reference to the social and economic context in which such property is situated. The Puvat are intended to initiate, implement and conclude, in certain times, determined by the participating Administrations, , a unique enhancement process of public buildings, in keeping with the addresses of territorial development and economic planning which may constitute, within the economic and social context, a stimulus, and attractive element of sustainable local development interventions, as well as to enhance local public services facilities and those relating to living. The implementation of Puvat can be carried out using the aforementioned tools: the “Fund of funds” and “territorial funds” and the “plan of alienation and exploitation of public property”

## The experiences

It is also necessary to add the program the reconstruction of the framework, sponsored by the Agency of State Property, "Value Country: project for the enhancement of public real estate assets "involving property that is often unused or underused, but with a strong strategic value , such as historic mansions or anything of value placed medium-low, in some cases, in disadvantaged areas . The initiative brings together business development projects aimed at the recovery of public goods throughout the national territory, through the discovery of new functions in line with the needs of the community. The project, which uses a mix of old and new regulatory instruments, favouring the granting of exploitation, is divided into several distinct brands for different types of goods and aims to increase the economic and social value and promote sustainable development of the territories.

The result of this elaborate production of legislative and policy initiatives can be summarized by the following overall results. Unitary development plans involving three regions and twenty Municipalities while the memoranda of understanding (Value program Region) were 5 regions and 11 municipalities (partly overlapping), for a total of 138 properties mainly ex-military. Of these, to June 2011, only 12 have indeed been alienated or granted. It should be noted that for about 60 real estate the Agency has completed the development of the land, that is the administrative process to allow an estimate of the property that includes the capital gain from the change in the urban planning tools has been completed. In some cases these goods have been made available to the private sector but found no interest in responding to invitations to tender or auction (Ponzini, 2013).

Among the most significant experiences concessions regarding enhancement Villa Tolomei in Florence (2008) and the Old Customs House of Molfetta (2009) are worth mentioning. In the first case, the 16th-century complex in the hills of Marignolle, consisting of 7 buildings and 17 acres of parkland, was the subject of a call for the recovery, conservation, management and enhancement through a 50-year concession that attracted a group of private companies that proposed, by means of a double fee at auction, its transformation into a luxury hotel. The enhancement project involved the reconstruction of the entire complex as a functional upscale residence accommodation with all the complementary services: 40 rooms-suites, restaurant, Spa, spacious reception and waiting area for guests and equipped outdoor spaces. In May 2013, the structure was opened to the public. Even in the latter case, the 18th-century customs building, more than 3,000 sq. m., which represents an important step in the planning of the redevelopment of the area and, in particular, the coastal strip of the city and the historic centre, was awarded in concession to locate accommodation and tourist activities.

Regarding the Unit value Programs, on a municipal-scale the PUV Ferrara includes 32 buildings, 10 of 22 State and property owned by the municipality, which will be subject to recovery and development, in accordance with the territorial and urban development planned for the city. The PUV Ferrara is represented by various types of goods located mostly within the medieval and Renaissance City

of Ferrara. The areas and premises resigned (historical palaces, convents, barracks, forts, firing ranges and former airport areas) already intended for institutional use, will take a more functional role to the current needs of the city. Areas and buildings located in peripheral areas, whose transformation is needed to implement the project of urban development of the city outlined in a new Structural Plan are also included. On a regional scale, the agreement involves 17 local government and 32 military buildings (forts, firing ranges, logistical bases and barracks) prevalent in the provinces of Genoa, Imperia, La Spezia and Savona that will be involved in a complex and diverse process of use and transformation in which the residential real estate, commercial property, commercial, hotel and manufacturing sectors will be integrated with public functions and new spaces for the community in respect of environmental and historical value of memory.

Valorisation processes will be made both by the transfer to local authorities, or through the placing on the market. In both cases, the programs have made the stage concerning the drafting of feasibility studies.

### **Issues and work perspectives**

The trend to replace more integrated actions that can add to the monetary benefit, including benefits in terms of redevelopment and regeneration in urban scale (PUV) and territorial (Puvat), in the first initiatives aimed at simple economic value of individual assets (with cash only benefits) is evident in the evolution of the regulatory framework and current experiences. It is abandoning the emergency setting to retrieve an ordinary policy vision for growth. This keynote address, is definitely more acceptable, but requires insights and improvements from a methodological and procedural viewpoint.

In particular, the program enhancement Unit (PUV) assumed forms and perspectives which were very articulate and, in some respects, not homogenous. They are programmatic initiatives which refer to collections of goods and urban, regional subregional and very diversified systems, that aim to induce differentiated impacts and transformations. Such a situation is bound to occur, and even be amplified, even in the Territory Development Plans.

Therefore, the PUV and Puvat constitute an interesting field of methodological reflection and operational testing, which is highly innovative and full of potential.

In particular, the following points appear to be a priority:

- the enhancement and the disposal of public estate assets must be made in the context of urban regeneration projects, in coherence with the objectives defined by the local authority Planning (strategic or ordinary) and must ensure the right balance between a satisfactory return for private investors and a concrete outcome on the territory in terms of urban quality;
- the need for effective governance for project success. Opening a negotiating table with the Superintendents and in effective participation of the inhabitants in the definition of strategies for the reuse of goods that often assume a value of identity are essential conditions for the success of the interventions;

- the success of development cannot ignore a correct evaluation of the market to determine in advance what to put on the market, how and at what times.

With respect to this latter point, the importance of a timely consideration of estimated size able to reconsider the criteria for assessment of real estate in order to secure the price of sale and identify strategies for economically beneficial reuse more realistically is evident. It shows a lack of understanding of the criteria and evaluation methods for complex real estate transactions by credit institutions called upon to assist the developers with over or under estimates of costs and/or salvage prices (posts, 2013). Within complex operations, such as configuring those foreseen by Puv and Puvat, involving a large number of buildings, the estimated assessment must take into account not only the potential of using the single asset, but also mutual interactions (possibly virtuous) that are triggered between them, depending on the possible alternatives for reuse. In the next paragraph a prediction methodology able to satisfy that need will be illustrated.

### **A complex estimation methodology. The transformation matrix**

Public resources, often characterized by architectural and environmental values, have not only the ability to deliver cultural services but are also real economic resources capable of delivering a flow of benefits which are readable in an economic dimension.

The choices of intervention and exploitation, which all too often refer to the emergency, can be significantly improved by taking into account the economic dimension. One of the main contributions offered by financial analysis refers to the problem of choices and in particular to the availability of quantitative indicators able to guide rational planning choices and action.

It appears necessary to restore a doctrinal character distinction applicable between value judgments and evaluations. "The evaluation is a measure of expectation that has its genesis in the analytical pattern of supply and demand, and that tends to establish a monetary value; instead, value judgment has its cornerstone in the comparison between economic entities through which leads to acts of choice. In a nutshell the evaluation is a monetary value forecast and value judgment is a judgement of choice [...] the evaluation involves the private sector and the public one, the judgments of choice only affects the public sector, with the exception of convenience judgments" (Carrer, 1994).

It is clear that the formulation of judgements of choice must make use of evaluations and prediction based on finding the right practical reason for the evaluation.

In this view, it should be considered that public buildings are often susceptible to several hypothetical changes in intended use, which plausibly lead to the identification of the basis of value in the value of transformation. It is the same estimative literature that leads to the transformation value to express value judgments in the urban sector relating to interventions on architectural heritage (Simonotti, 2006).

The transformation is based on the following theoretical requirements: 1) the property object of the estimate can be transformed and/or vary in purpose and use in accordance with the principle of ordinariness. 2) processing and repurposing result in advance as being more profitable compared to the actual conditions at the time of estimation, once the physical, technological, legal, financial and institutional constraints have been satisfied; 3) transformation and repurposing involves a non-zero cost in relation to the transformation process.

In operational terms, the criterion of the transformation value, in its twofold character, lends itself to formulate both estimates, configuring itself as a prediction method, and economic judgments, as a criterion of choice.

The transformation value of a property susceptible to a transformation is equal to the difference between the value of the transformed property, once the realization of the work or the intervention, and the overall cost of the project measured at the time of estimation is considered:

$$\text{Transform value} = \text{Value of transformed} - \text{Cost of transformation.}$$

The value of the transformed property is carried out through appropriate evaluation methods as specified in the International Valuation Standards (IVS, 2012). The IVS consider that the most popular approaches to estimate the market value of a property are: the sales comparison approach or market comparison method (or market approach); the income capitalization approach or method of income capitalization (income approach); and the cost approach or the cost method (depreciated reconstruction).

The market comparison method is a procedure for estimating the value or market rent, based on the comparison of the property object of the estimate with a set of recently traded similar comparison real estate with known prices. The method consists of a systematic comparison procedure that takes the technical and economic characteristics of real estate as a benchmark. The method is therefore based on real market data collection and the characteristics of the properties.

Income capitalization includes methods that determine the market value considering the ability of buildings to generate an income. This procedure is based on the conversion of the property income in capital value through capitalisation. The cost method (depreciated reconstruction) is an estimation procedure aimed at determining the value of a property through the sum of the market value of the land and the cost of reconstruction of the building, in case it has depreciated. Using the cost method is often suggested in the estimation of special properties and buildings or parts of buildings. The transformation cost is defined as the cost of construction, reconstruction, demolition, redevelopment, rehabilitation, etc. depending on the work and the assistance provided by the transformation.

Therefore, the transformation value represents the value of the resources which is affected by the project at the time of the estimation, considering the susceptibility of economic resources that originate from the particular project. Since it is possible to envisage more alternative uses for the same resources, it is possible to estimate numerous transformation values, each relating to a particular use; it

being evident that the more convenient use for the resource is one that has the highest transformation value (Simonotti, 2006).

Estimative literature indicates that the transformation value is a useful tool in order to identify the Highest and Best Use (HBU) in the economic criterion of the postulate of ordinariness.

When the investment is for a single property, for which it is possible to have two or more alternative destinations compared to its current use, according to the principle of ordinariness, the task of appraising considers: a) the prediction value as the expected value, understood as an average of the current use and value in alternative uses, weighted according to their probability; b) the Highest and best use (HBU) as the target to which the highest value among the values of the transformation related to alternative uses corresponds. In case of alternative destinations to the present one, the HBU refers to applications which comply with technical, financial and legal constraints and which are cost-effective; to this end, ignore the computation of expected value cannot be ignored, once the present value and transformation values relating to alternative destinations have been estimated.

In schematic terms, a current target and two destinations alternative  $B$  and  $C$  with probability respectively  $p_A$ ,  $p_B$ , and  $p_C$  with  $p_A = p_B + p_C$  can be assumed for the same property. Indicating with  $V(A)$  the present value and with  $V(B)$  and  $V(C)$  the transformation values in destinations  $B$  and  $C$  respectively, the prediction value  $V$  of the property is the expected value as follows:

$$V = V(A) \cdot p_A + V(B) \cdot p_B + V(C) \cdot p_C.$$

For the frequency theory, indicating the absolute frequencies of destinations with  $f_A$ ,  $f_B$ , e  $f_C$  and the total frequency  $F = f_A + f_B + f_C$ , the estimated value of the property  $V$  is the expected value as follows:

$$V = V(A) \cdot \frac{f_A}{F} + V(B) \cdot \frac{f_B}{F} + V(C) \cdot \frac{f_C}{F}.$$

If  $V_i(B) > V_i(C) > V(A)$  e  $f_A > f_B > f_C$ , then the HBU of the estimated property is the destination  $B$ , which has a greater value, and the most frequent destination is the current destination  $A$ . The estimate of a property susceptible to valuation is therefore equal to the expected value.

If, on the other hand, the analysis moves from the single property to a complex wider set of real territorial scale, it is still possible to attribute the same criteria, by adequately adapting to take account of the relationships of complementarity between the parties within the framework of a unified plan of action.

In examining the possible targets of a given territorial sector, it is necessary to analyse economically the possible transformations of each individual property that belongs to that sector, in a complex perspective, intended to transpose and represent mutual interactions between the parties.

The methodological approach proposed conceptually recalls the economic criterion of the postulate of ordinariness, and in particular relies on the Highest and Best Use identification, adapting, however, in order to define the cheaper target in reference not only to the individual but to the whole property complex of buildings belonging to the sector.

More specifically, given a territory framework there are  $N_i$  strategic properties ( $i = 1, 2, \dots, n$ ), and identified  $D_j$  destinations for the entire sector (with  $j = 1, 2, \dots, m$  - management, sales, production, etc.), the starting point is the construction of a matrix of  $n$  rows and  $m$  columns that aims to cross the  $k$  destinations of individual buildings (for  $k = 1, 2, \dots, p$ ) with that of the entire sector, to identify an economically higher macro destination.

For each of the properties  $N_i$  and macro-destinations  $D_j$  (so-called for each cell of the matrix transformations) it is possible to define:

- a value in the current state  $V_{A_i}$
- many values of transformation  $V_{T_{ijk}}$ , with  $k=1, 2, \dots, p$ , (transformation values of  $i$ -th property, for the  $j$ -th macro-destinations and for the  $k$ -th specific destination) how many are, for that property, the alternative destinations within the  $k$  macro-destination of the sector;
- a more convenient  $h$  specific destination, for the  $i$ -th property and  $j$ -th sector destination, an expected value for the  $i$ -th property and the  $j$ -th macro-destination, calculated as a weighted average between the value in the current state and the values of transformation of specific destinations (Ciuna, De Ruggiero, Salvo, 2013):

$$V_{S_j} = V_{A_{ij}} + w_1 \cdot V_{T_{ij1}} + w_2 \cdot V_{T_{ij2}} + \dots + w_p \cdot V_{T_{ijp}}.$$

The coefficient  $w_k$  has the task of weighing the  $k$ -th specific destination examined in light of the mentioned relations of complementarity between the properties investigated in the sector.

By way of simplifying, the weight coefficient  $w_k$  may be determined in function of the frequency of that specific destination in the sector, and more specifically considering an inverse proportionality between frequency and weight:

$$w_k = \frac{1}{\frac{f_k}{F}},$$

where  $f_k$  is the frequency of the destination in the compartment,  $F$  is equal to

$$F = \sum \frac{1}{f_k}.$$

Table 1. Transformation matrix.

Destinations and properties	D <sub>1</sub>			...			D <sub>j</sub>			...			D <sub>m</sub>					
	V <sub>Tijk</sub>	HBU	V <sub>Sij</sub>	V <sub>Tijk</sub>	HBU	V <sub>Sij</sub>	V <sub>Tijk</sub>	HBU	V <sub>Sij</sub>	V <sub>Tijk</sub>	HBU	V <sub>Sij</sub>	V <sub>Tijk</sub>	HBU	V <sub>Sij</sub>			
N <sub>1</sub>	V <sub>A11</sub>			V <sub>A1j</sub>			V <sub>A1m</sub>			V <sub>T111</sub>			V <sub>T1m1</sub>					
	.....			h			V <sub>S11</sub>			.....			h			V <sub>S1m</sub>		
	V <sub>T11k</sub>			V <sub>T1jk</sub>			V <sub>T1mk</sub>			.....			.....					
	.....			.....			.....			.....			.....					
	V <sub>T11p</sub>			V <sub>T1jp</sub>			V <sub>T1mp</sub>			.....			.....					
N <sub>i</sub>	.....			V <sub>Ai1</sub>			V <sub>Aij</sub>			V <sub>Aim</sub>			.....					
	V <sub>Ti11</sub>			V <sub>Tij1</sub>			V <sub>Tim1</sub>			.....			.....					
	.....			h			V <sub>Si1</sub>			.....			h			V <sub>Sim</sub>		
	V <sub>Ti1k</sub>			V <sub>Tijk</sub>			V <sub>Timk</sub>			.....			.....					
	.....			V <sub>i21p</sub>			V <sub>i2jp</sub>			V <sub>T2mp</sub>			.....					
N <sub>n</sub>	.....			V <sub>An1</sub>			V <sub>Anj</sub>			V <sub>Anm</sub>			.....					
	V <sub>Tn11</sub>			V <sub>Tnj1</sub>			V <sub>Tnm1</sub>			.....			.....					
	.....			h			V <sub>Sn1</sub>			.....			h			V <sub>Snm</sub>		
	V <sub>Tn1k</sub>			V <sub>Tnjk</sub>			V <sub>Tnmk</sub>			.....			.....					
	.....			V <sub>Tn1p</sub>			V <sub>Tnjp</sub>			V <sub>Tnmp</sub>			.....					
			ΣV <sub>si1</sub>			ΣV <sub>sij</sub>			ΣV <sub>sim</sub>									

The relationship of inverse proportionality is intended to represent the condition whereby in a territory sector the presence of buildings having varied uses tends to be more effective than a uniform distribution of destinations.

Once the expected values for each property and for each hypothetical target in the sector have been identified, it is possible to identify the most convenient macro-destination by simply considering which of these has the highest total expected value:

$$\left\{ k / \sum V_{sj} = \max \left\{ \sum V_{s1}, \sum V_{s2}, \dots, \sum V_{sj} \right\} \right\}.$$

The described methodology allows to identify the best destination in the sector, providing a useful tool for the Unitary Development Plans.

## Conclusion

This paper has identified two instruments in the Unitary Development Plans and in the Unitary Development Plans of the Territory (whose operational testing has yet to be started) potentially capable of achieving the required balance between the needs of rehabilitation of the national debt and the willingness to use the public real estate to encourage urban regeneration and planning .

In this context, in order to evaluate the effectiveness of both these instruments, a structural weakness has been identified in the approach that is currently being used to estimate the value of the assets involved in the territorial planning, that it is too simplistic and therefore inadequate.

Accordingly the present work has proposed a new estimating method that, in relation to a complex spatial transformation, examines the possible destinations (and therefore the value of transformation) of each property involved in the unitary intervention, also considering the relations of complementarity with the changes undergone by the other properties.

The matrix method of transformation, moving from the postulate of ordinarieness and based on the Highest and Best Use, allows for driving of the choices of spatial planning taking into account the effect generated by the virtuous “network” that makes the greater overall value the sum of its parts.

The practical application of this methodology to a concrete case study represents the next step of the research in progress, whose central objective remains the awareness of the complexity that accompanies each intervention on the territory and that only through a fair approach and objective evaluation can understanding and sharing be found.

## References

- Agenzia del Demanio (2012), Politiche e strumenti per la valorizzazione economica e sociale del territorio attraverso il miglior utilizzo degli immobili pubblici. Guida alle innovazioni legislative. [www.agenziademanio.it/export/download/demanio/vademicum\\_3.pdf](http://www.agenziademanio.it/export/download/demanio/vademicum_3.pdf).
- Agenzia del Territorio (2011), Manuale operativo delle stime immobiliari, Franco Angeli, Milano.
- Alberini, C. (2011), Urbanistica e Real Estate. Il ruolo della finanza nei processi di trasformazione urbana, Franco Angeli, Milano.
- Carrer, P. (1994), “Problematiche nelle valutazioni e nelle stime relative alle valorizzazioni, alle gestioni ed alle dismissioni dei beni immobili del settore pubblico”, *Genio Rurale*, n° 6, p. 47 e segg;
- Salvo F, De Ruggiero M, Ciuna M (2013), Property Prices Index Numbers and Derived Indices, *Property management*, vol. 32.
- Fusco Girard, L. (1990), Risorse architettoniche e culturali: valutazioni e strategie di conservazione, Franco Angeli, Milano.
- International Valuation Standards Committee (2013), IVSC International Valuation Standards Council .

- Manzo, R. (2008), *Partnership per fare: la valorizzazione dei beni pubblici sul territorio*, Forum PA., Roma.
- Pasanisi, S. (2013), "La valorizzazione del patrimonio immobiliare pubblico. Alcuni profili di criticità", *Aperta Contrada*.
- Pennesi, S. (2012), "Fattori condivisi di una "spending strategy..." la valorizzazione del patrimonio immobiliare e mobiliare pubblico. Il ruolo attivo delle amministrazioni", *Gazzetta Amministrativa*, n.1.
- Screpanti S. (2012 ), "La dismissione e la valorizzazione del patrimonio" in *Giornale di Diritto Amministrativo* n. 12.
- Simonotti, M. (2006), *Metodi di stima immobiliare*, Dario Flaccovio, Palermo.