Return on investment

The single-family house, a classical architectural start-up project?

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First Houses...

Le Corbusier's first house, the Schwab House, built 1916 in La-Chaux-de-Fonds, Switzerland, received recognition only after the architect had found fame for other designs. One of the first houses that F. L. Wright designed as a self-employed architect, the Winslow House at River Forest (1894), is regarded as the beginning of his series of 'Prairie Houses'.

The Schröder House in Utrecht, built 1924, Gerrit Rietveld's first commission as a professional architect, and Robert Venturi's Chestnut Hill House, designed 1962 for his mother in Pennsylvania, remain the best-known projects of these architects.

Toyo Ito's Aluminum House (Kanagawa) of 1971 and Jean Nouvel's Maison Delbigot of 1970 have remained more or less unrecognized.

In 1942, while still a student, Philip Johnson built his 'First House', a small home for himself, known as the Ash Street House and accepted by the Dean as Johnson's final academic project in 1943. The next project he designed for himself was built in 1946, the acclaimed 'Glass House' in New Canaan, Connecticut. This was the house that launched Philip Johnson to fame.

Whilst house design was important in the educational curriculum of modernist architects, it is less significant nowadays. At universities, single family houses are examined as historical case studies rather than assigned as design problems. **The design of the house typology might have lost in significance in scholarly discourse, but when it comes to the traditional scope of architectural practice, the house will always remain a classical startup project.** It will be a relatively simple project to oversee, and it can be a test case for all stages of design and construction. A completed project is almost always the best reference to get follow-up commissions. Young architects take their chances and are often ready to invest more time and energy than they are paid for, to the point of free advice.

This article was researched and written in 2005/2006. Today both diagrams in this article would look significantly different because of construction cost development.

While the percentages for calculating the fees for architectural services for a 120 m² house like the one in our diagram are still the same, the actual Euros to be earned has changed. This is, of course, regardless of the amount of work, deliverables and hours put in for designing such a house.

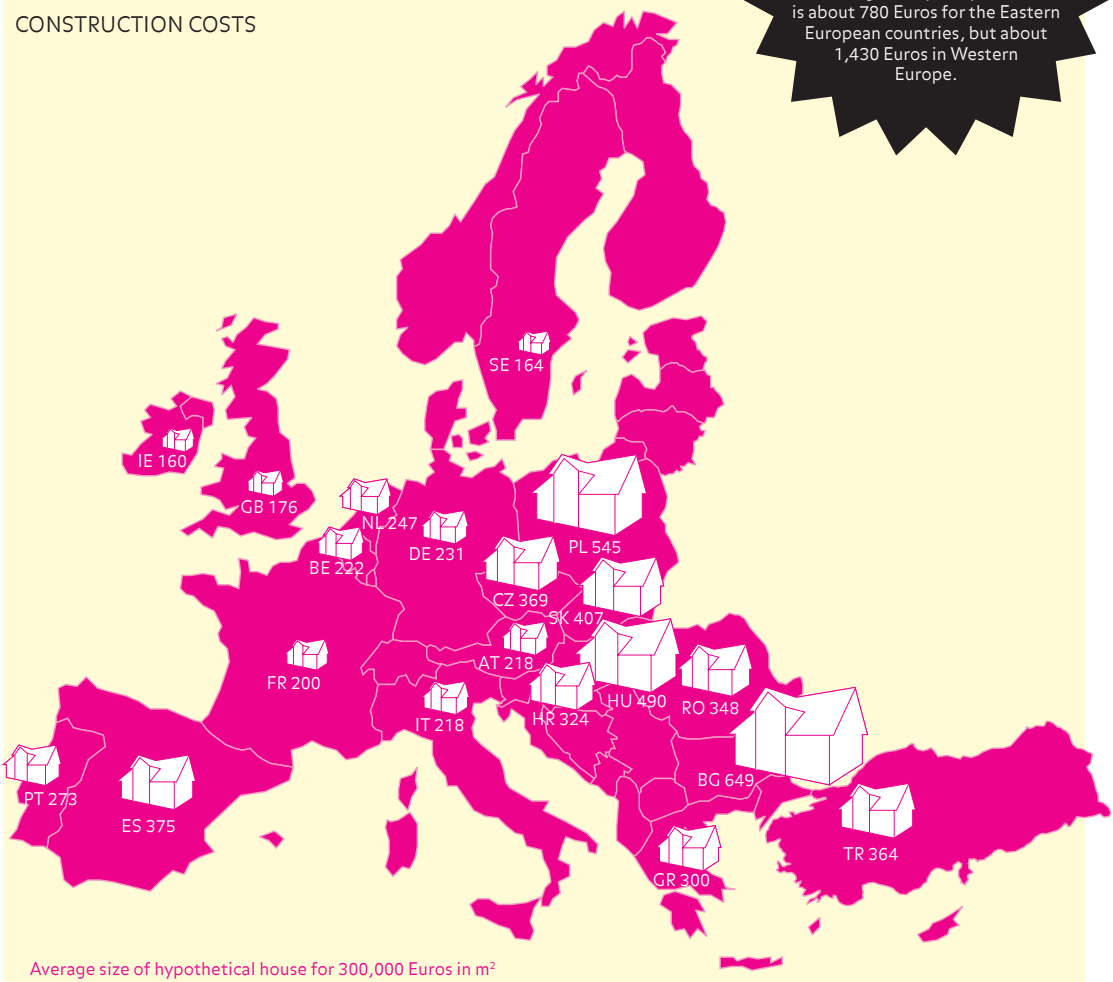
A Case-Study

Among the many designs exhibited in the Wonderland traveling exhibition, the majority of the realized projects are designs for living spaces. One third of the teams have a single-family house among their first three realized projects, whereas every fourth team does not have a built project to show in their portfolio. It is an interesting if inconsistent phenomenon: while the architect's purview appears to be expanding in general, it has remained very traditional in terms of building practice. Exploring the fundamental significance of a first completed project for startup practices is even more interesting in view of the geographical distribution of the

The houses

built by the Wonderland teams confirm the general trend: the average cost per square meter is about 780 Euros for the Eastern European countries, but about 1,430 Euros in Western Europe.

CONSTRUCTION COSTS



Average size of hypothetical house for 300,000 Euros in m²
Data source 2006

Compiled by Astrid Piber and Hannes Pfau

Wonderland houses: by far the most houses were designed and realized in the Czech Republic, followed by Austria, Slovenia and Italy. The least number of houses built could be found among the teams of the Netherlands and France. This pattern brings us to our working hypothesis: **practicing architecture in Eastern European countries is still more building-related, whereas architectural practice in Western Europe also encompasses the conducting of institutionally supported studies and the development of ideas.** We were interested to find out whether architects from the Eastern and new EU member states need more projects to survive than their Western colleagues and whether there is something like a North-South and West–East differential in income among European architects.

Construction costs

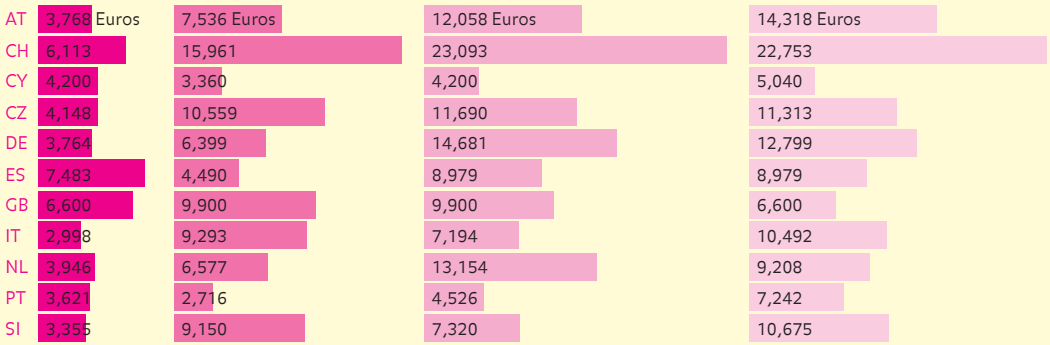
In comparing these 'economics of practice', one has to acknowledge that there are substantial regional differences across Europe. Residential markets develop at different speeds, and location, specifications, accessibility and the level of finishes, fittings and furnishings all have a significant impact on construction costs. Technical standards vary throughout Europe depending on local tradition in practice, climate and building regulations. There is little statistical data available on construction costs for single family houses. We refer to market figures published in the European Focus on the Residential Market report by EC Harris (Spring 2005). The indicative benchmark cost for high-quality residential spaces is applied to identify average-size houses for the different European countries.

COMPENSATION FOR ARCHITECTURAL SERVICES

The average percentage of an architect's fee (full service) for a single family house based on a hypothetical construction cost of 300,000 Euros net range from 14.5 % (Switzerland) to 5.5 % (Cyprus).

AT	12.5 %	CH	14.5 %	CY	5.5 %	CZ	12.5 %	DE	12.5 %	ES	10 %
GB	11 %	IT	10 %	NL	11 %	PT	6 %	SI	10 %		

The proportionate share for the initial design phase (schematic design) is highest in Spain and Cyprus (25 %) and lowest in Switzerland (9 %). By contrast, the share paid for construction supervision is highest in Austria (38 %) and lowest in the Netherlands (28 %).



Data source 2006

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MACROECONOMIC HYPOTHESIS

Data source 2006

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For a 120 m² house, construction cost and average fees for full architectural services vary within Europe. A hypothetical planning schedule based on average hour rates indicates that a theoretical 204 working hours are spent in Great Britain and approximately 336 in Cyprus.

Compensation for architectural services

We used the fee scales applicable in different countries to calculate the pay for architectural services as a percentage of total construction costs. Criteria and calculation methods differ from country to country. Fee scales are compulsory only in Germany, Italy and Slovenia, whereas in Portugal, Greece, Luxembourg and Malta, they are binding for public commissions only and provide a guideline for the private sector. Fee scales are also recommended in most other countries, apart from those that have not such guideline at all, like Ireland, Finland, Sweden, Turkey, and Norway.

In Europe, we find the highest average recommended percentage in Switzerland and the lowest in Cyprus. When looking at fee components as allocable to design stages, it also becomes evident that the earlier phases, i. e. design and planning, are better paid in Spain, Cyprus, the United Kingdom and the Netherlands, whereas fees for building supervision are relatively higher in Austria, Italy, Slovenia and Germany. The general assumption of a North-South and West-East differential is confirmed as long as the compensation for architectural services is expressed as a percentage of construction cost.

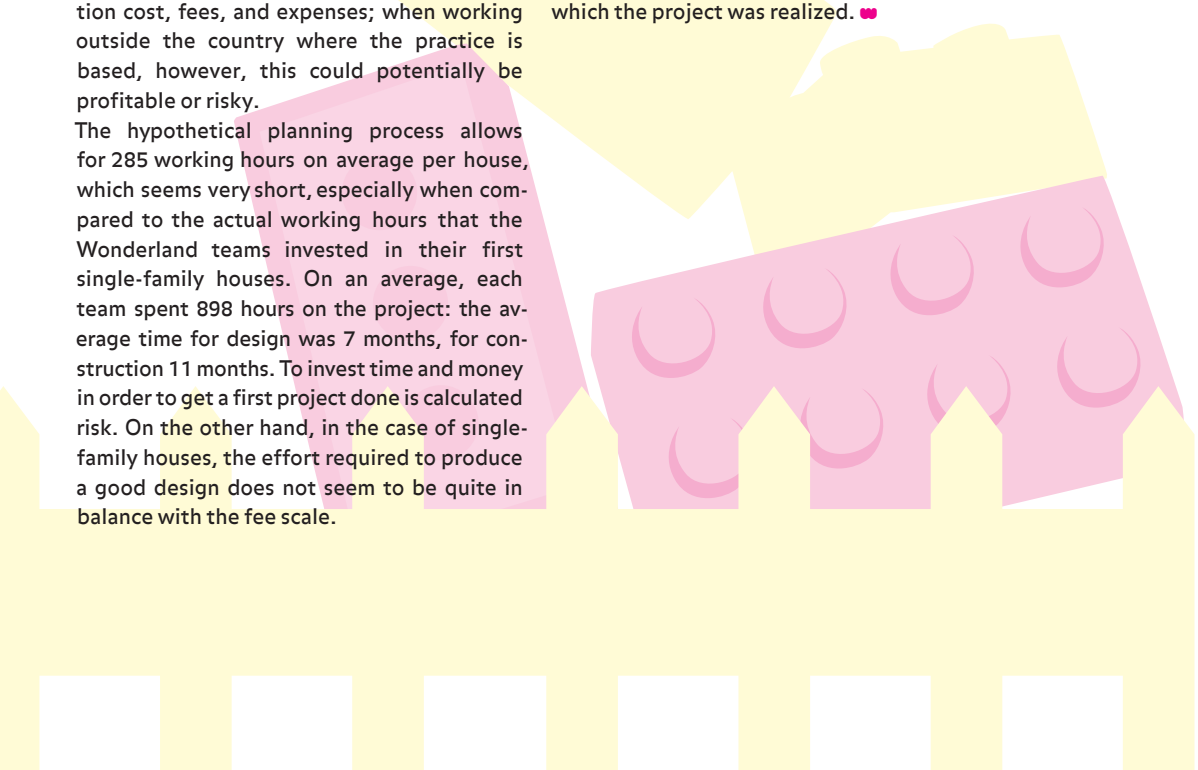
Macroeconomic hypothesis

The average total construction cost for a 120-square-meter house in each country is set in relation to the calculated fees and the (hypothetical) amount of work needed for an ideal average planning process. This comparison shows that the variance of 'practical economy' is less than expected. The average working time needed for the design of a house in Austria with a construction budget of 165,000 Euros is not so much different than what is needed for similar-sized house in Spain with a budget of 96,000 Euros; still, the average recommended fees differ widely, amounting to 20,724 Euros in Austria and 9,578 Euros in Spain. Within the macroeconomic conditions of a given national economy, there is a given and calculable relationship between construction cost, fees, and expenses; when working outside the country where the practice is based, however, this could potentially be profitable or risky.

The hypothetical planning process allows for 285 working hours on average per house, which seems very short, especially when compared to the actual working hours that the Wonderland teams invested in their first single-family houses. On an average, each team spent 898 hours on the project: the average time for design was 7 months, for construction 11 months. To invest time and money in order to get a first project done is calculated risk. On the other hand, in the case of single-family houses, the effort required to produce a good design does not seem to be quite in balance with the fee scale.

To sum up:

For a startup practice, single-family house design does not yield much of an economic benefit. However, it provides young architects with an experience in design and project management. Occasionally, it contributes to becoming recognized as a practice. History teaches us that a 'first house' can set the scene for future projects and potentially may boost an architect's career. Herzog & de Meuron, for example, received international attention very early in their career with their Blue House, completed 1980 in Oberwil, Switzerland. On the other hand, every project is a test case. And what about all the unknown first houses? A built first house is an opportunity for every architect to give manifest expression to an individual vision which also reflects the time in which the project was realized.



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