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Rehousing Ukraine Initiative

Economic and policy considerations for designing a Ukrainian affordable housing policy

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Summary

Although affordable housing is a social good (it helps families, the elderly, vulnerable people, and veterans), it is also an economic good (expensive to produce, valuable to its owners, and a driver of economic growth) and a policy good (contributing to sustainable, equitable, accessible cities). Because of this, affordable housing for citizens is a policy goal worldwide and must be an urgent priority for Ukraine’s postwar economic repositioning and revival. This entails addressing core questions of national policy: who benefits; where it is to be located; how it is produced, financed, and owned; and how it is coordinated with other key sectors of the society and economy.

This paper sets forth economic and policy considerations that should bear on housing policy, and should be borne in mind by national policy makers from other sectors.

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1. The housing context for reconstructing Ukraine

- 1.1. Since February 24, 2022 more than 800,000 homes in Ukraine have been damaged or destroyed by the Russian and Belarusian aggression. The bill for restoring this many homes is currently estimated to exceed \$54 billion². However, a simple like-for-like replacement will not deliver a successful reconstruction.
- 1.2. 14 million Ukrainians³ (over a quarter of the population) are displaced in some way. How many will return and to where are key questions for planners. In many places the housing stock requires major reinvestment, especially in obsolescent vernacular 'stalinka' and 'khrushchovka' apartment blocks. 90% of homes are in private ownership, yet many households lack the capital for repair and refurbishment.
- 1.3. The scale of household dispersion, coupled with the scale of housing destructions in Ukraine's eastern oblasts, will present the Government of Ukraine with a housing challenge of a scale unprecedented in developed nations since World War II. The challenge will be to do everything possible, everywhere, all at once.
- 1.4. Given these challenges, the creation of subsidized, affordable housing will form an important foundation for urban reconstruction. However, developing a comprehensive and forward-looking affordable housing policy⁴ is beset with significant economic and political/policy challenges. The following sets out aspects that will need to be considered in developing such a policy.

² Kyiv School of Economics Institute's damage assessment, 24 January 2023; [available via link](#)

³ Russia's invasion of Ukraine has driven some 14 million Ukrainians from their homes in "the fastest, largest displacement witnessed in decades". Filippo Grandi, of heads the UN High Commissioner for Refugees, November 2022.

⁴ Under current Ukrainian law, 'affordable housing' is defined based on the formal parameters of existing programmes that subsidize particular types of housing loans. A broader and more future-responsive definition will be needed, and is beyond the scope of this paper. lg.molod-kredit.gov.ua

2. Some parameters for an affordable housing policy

- 2.1. It is important from the outset to define the parameters of an affordable housing policy. In this case, it is assumed the objective is to minimize the number of a target group of people without adequate housing, given a finite amount of public money available.
- 2.2. The definition of the target group to benefit from affordable housing is deliberately not specified. Broadly speaking these will be relatively poor households. However, as poverty is a multidimensional problem, so delineation of the target group is partly a matter of political choice, partly a parameter of the policy. Accordingly, in this paper the term “eligible people” is used as shorthand for the eventually selected target group(s) of beneficiaries. Obviously, the precise definition of the term is not self-evident and will need working on.
- 2.3. Enabling all its citizens to have adequate housing is a policy goal of virtually every country in the world. Because even the sensibly regulated private (~free) market does not provide the adequate solution that is affordable for the lowest income group of households (due to laws of land use economics and rising standards of housing consumption), the government steps in either with (a) homeless shelters (last resort but seldom best solution), and (b) one level up from that, affordable housing that by definition requires some mix of regulation and public money.
- 2.4. As the size of the affordable housing challenge to be met with affordable houses is the result/residual of the total size of housing problems and the effectiveness of other tools used, theoretically the market for affordable houses has to be analyzed within a broader framework, possibly within the entire housing market or even the entire reconstruction plan. In practice, this is impossible because each part of the economy influences every other part, and undesirable for postwar Ukraine, where everything is urgent and action must be taken even with incomplete or unreliable information.
- 2.5. The first question is, What can be left out from the analysis? That is, what factors/mechanisms can be ignored because they either
 - Are small in relative size of their effect (unfortunately unlikely);
 - Evolve much more slowly than the horizon of the reconstruction program (e.g., the size of typical households or climate change);
- 2.6. The second question is, What are the factors that must also be left out? That is, they are clearly important, but cannot be forecasted with much confidence, because
 - elements of need and effective demand can change very fast in response to security, economic, or demographic shifts. In addition, people’s movements are also highly responsive to changes in policy, laws, and incentives, including those adopted by the government, such as subsidies for owning vs renting their home; how much money is available for affordable housing or temporary accommodations from international

donors or Russian assets. There is great potential for unintended consequences arising out of static mental models of location-based need and effective demand.

- the landscape of postwar development will be influenced by the manner in which the war ends as well as the physical destruction or risk (e.g. including unexploded ordinance or land mines). Although much of this may be known within (say) twelve months of ‘the end of the war,’ that date may be clear only in hindsight, and many decisions will be taken during an interval of uncertainty.
- timely, granular, and reliable information (e.g. family links of people spread all over the country and abroad; skills of people beyond the profile of their last job, people’s mental current status) will be impossible to gather without new-technology electronic big-data accumulation, which is currently unavailable but may be forthcoming soon. To that end, this paper presumes that the big-data aggregation already shown by Ukraine’s monitoring and capture of the specifics of destruction will, after the war, be likewise deployed to develop world-class models of people’s situations and movements.

2.7. Because these factors are important but unpredictable and unquantifiable, for any national (affordable) housing policy to be effective and responsive, it has to be

- Based on the principle of subsidiarity, i.e. all decisions must be made at the lowest level where the necessary set of information and powers are available. That is, a national policy with distributed geographic goals (oblast, raion, hromada levels), and then a menu of tools each sub-national unit of government can deploy to address its local needs in the best locally-responsive manner;
- Designed in a way that allows for individual programs to have flexible uses, scalable funding or intervention, and modularity (so that resources can be combined in different ways).

2.8. Beyond the simple overall affordable housing program constraints, a plethora of other challenges and constraints have to be taken into account when designing an affordable housing policy. These are discussed in the next section.

3. Considerations an affordable housing policy must address

A. Macroeconomic considerations

National policy issues

- 3.1. The pressing need for financial sustainability will set the context for an affordable housing policy. As countries at war do, Ukraine is already spending far in excess of its financial capacity. Consequently, fiscal sustainability will remain a primary consideration long into the post-war period. No one can know right now how much affordable housing will be a political priority, i.e. how much money will be allocated to meeting housing need. However, we can presume that hard budget constraints will operate and be applied to national housing resources.
- 3.2. In such circumstances, any affordable housing policy will have to include in-built mechanisms that ensure project costs remain within pre-set financial limits. Failure to manage cost overruns, especially in a context of high inflation of construction costs and any equipment or products needing to be imported, would leave unfinished homes to blight local landscapes and markets for years.
- 3.3. To deal with the twin challenges of scale (capital) and touch (property location specifics), as well as addressing commercial risks (market fluctuations) alongside non-commercial ones (abrupt policy or funding challenges, counterparty risks when dealing with government), many countries have evolved affordable housing delivery, financing, and ownership via public-private partnership (PPP); however, PPPs themselves are complex to set up and then require government to have particular skills to administer successfully.
 - In these housing PPPs, the government contributes critical resources (e.g., land at favorable cost, infrastructure, financing or household subsidies), and the private partner accepts government's rules and regulations and then develops and operates the property. In a common case, the private partner (a) is obliged to finish the project on time, (b) has the tools to assess and mitigate the risks, and (c) has the necessary capital to bear the risks⁵.
 - Often an effective housing PPP program would pair a private partner with a government counterparty (for instance, a housing development corporation that is a subsidiary of an appropriate governmental entity) and be governed by contractually enforceable joint venture or partnership/ LLC entity with enumerated rights and responsibilities. Ukraine has a robust population of conventional residential real estate developers, some of whom may have

⁵ Ukraine's history is full of examples of properties abandoned before completion, where the site was transferred to another developer along with a density bonus, additional lots for development, or other incentives.

stranded assets (uncompleted properties, unsold units) that could be repurposed into affordable housing quickly that could also enable the developers to recoup a portion of their currently stranded costs.

- In any PPP, the cost of taking commercial risks is priced into the developer's proforma, and currency hedging would also be a likely requirement.
- Additionally, a massive supply-side program will generate large financial transactions that in many other countries have proved convenient vehicles for corruption or waste, so appropriate transparency, incentives, and oversight will be required in designing and implementing any public-private partnership (PPP) delivery approach.

Managing defaults

3.4. Although the term Public Private Partnership (PPP) is used in many different contexts, it is a broad umbrella that means many different things in different countries and industries. Further, although Ukraine has enabling legislation defining a particular type of state-led PPP, other forms of joint venture, partnership, or contractual structure achieve similar outcomes to PPPs. Hence any PPP, whether narrowly prescribed or broadly imagined, is vulnerable to moral hazard, "privatizing the gains and socializing the losses," and in affordable housing, a government's understandable desire to protect the householders from loss can lead to higher levels of moral hazard.

Managing inflation

3.5. In postwar Ukraine, the share of the population that will meet any reasonable affordable housing eligibility standard will be unprecedentedly high, unlike anything Europe has experienced for nearly 80 years. Initially, the need for housing will far exceed supply, and many households with need will lack effective demand (ability to pay rising market prices). If government seeks to satisfy the need without concomitant and contemporaneous expansion of supply, the government could exacerbate the risk of demand-pull housing inflation (too much money chasing the same fixed number of goods). Such an outcome would have the unintended and unjust consequence of reallocating resources *from* those who are ineligible for affordable housing support *to* those who capture the benefit (by insider knowledge or 'market eviction'). Ironically, by seeking to meet housing need, the government could unintentionally push up the price of all housing, and that might even increase the number in need of support. For these reasons, any national housing policy should include incentives for self-improvement and incremental housing schemes, potentially with subsidies or tax rebates for those building or renovating their own homes.

3.6. Credible and transparent communication about the intentions of the government is an inherent part of the solution because it can have a fundamental impact on private sector investment. In turn, this will affect the size and nature of the problem to be solved by the government itself. Government announcements about where and how much

affordable housing is to be built will have an effect on internal migration (as well as local land prices), but only if their contents are credible. Credibility needs to be founded on well-thought-through strategic plans.

Improving land usage

- 3.7. Post-war reconstruction might provide an opportunity to address inefficient land holdings. Owners with inefficiently small land plots and/or who lack the capacity to achieve viable development or agricultural production could long lease their land to the government to develop affordable rental homes. The transferred land could then be bundled into efficient sites and let to investors for the long term (i.e. 50 years or more, possibly with formal renewals) at a much higher rental fee than the original owner might have received.
- 3.8. After the war Ukraine will be full of brownfield sites that the government will need to remediate one way or another. At the same time, outside developers and investors will tend to prefer greenfield, so as not to have to evaluate safety, security or environmental risks. Leaving the cleanup of brownfields exclusively to the government will lead to socially inferior solutions, among other things because the urban planning will be disjointed and once the re-urbanization process is accomplished there will be hardly any incentive for finishing the cleanup on the rest. Reusing land will be particularly important because significant post-war shifts in the spatial distribution of the population are likely to require the greenfield sites. Hence, as much as possible, affordable housing should be constructed on brownfield land because it will be a high-density use and brownfield is more likely to have established infrastructure grids (roads, power lines, water/ sewer). As the full cost of cleaning-up the brown fields cannot be borne by the budget of affordable housing projects, the government should share it with the private partner – and this is a natural symbiosis that many countries have addressed with public-private partnerships.
- 3.9. In addition, eminent domain (procedures of "purchase for public needs/ seizure for public necessity" as envisaged under Ukrainian law) will be an essential tool for urban redevelopment, especially in the context of master-planning damaged cities. New or substantially renovated infrastructure will need to be laid down according to a well-planned distribution of property uses (schools, medical centres, manufacturing, retail). The necessity for deciding the city's future form quickly, will necessitate having procedures (timescales for implementation; authority who will be responsible to govern the seizure for public necessity if the plots for one project/ complex are located in different settlements and so on) that are simplified and streamlined, *but* also appropriately protective of citizens' and property owners' rights. This is not easy and foreign hard-currency aid is often a critical resource to resolve conflicting valid perspectives.

B. Microeconomic issues

Incentive constraints

- 3.10. It will be important that an affordable housing policy addresses the need for incentives for all players necessary for a successful outcome.
- 3.11. Crucially, the policy must prevent the creation of ‘ghost towns’, areas of concentrated market failure. The policy will have to ensure that affordable housing is always attractive in terms of location, quality and price.
- 3.12. Affordable housing investors exist in a natural tension with government. On the one hand, investors in these projects need the government to be a reliable partner – and on the other, government needs to minimize the risk of a private partner’s being tempted to game the system via strategic default or later profit capture, at any time in the implementation period, which may be decades-long in the case of rental. Additionally, when one arm of government is landlord to citizens being funded or incentivized by another arm of government, government’s enforcement against itself is less zealous than it is enforcing against a private party. Many countries thus have formalized consumer advocate or ombudsman activity to protect the rights of citizens.
- 3.13. Finally, the government’s municipal funding structure should ensure that municipalities are encouraged to support the development of affordable housing projects. This would ensure municipalities are not market-incentivized to provide high value units that maximize local government tax receipts and generate limited demand on municipal services.

Reducing corruption and encouraging community involvement

- 3.14. As is recognized by the national government, corruption is a potential problem that will have to be focused on. The most important tool against corruption is transparency and public scrutiny, supported by public accountability and either contractual or judicial penalties. However, this works only if there are players who have enough interest in holding the others accountable without the danger of becoming complicit. Based on European examples, civil or community organizations might be invited to articulate community opinions, monitor project development and report any departure from plans or regulations. The relationship would be determined by a standard public agreement which ensures the civil organization was resourced to play its roles.

C. Questions of equity and allocation

- 3.15. At a national level, the affordable housing programme will be affected by government decisions on the distribution of windfall funding across a range of very pressing needs (derived from Russian compensation or international aid). What should housing's share be relative to defense, infrastructure or education? Less normatively, in governmental metrics, housing can lose out in benefit/cost methodologies over capital investment because under some economic models it can score poorly for contributing to economic growth⁶. Conventional European analyses will need significant adjustment if affordable housing is to have any priority in the long-term battle for national resources – but in the immediate term, for Ukraine affordable housing might be a much higher priority as the only solution for shortages of priority labor force workers, which may include construction workers, educators, health care providers, first responders (e.g. police, fire, EMTs) and any category of civil servants whose pay structures place them at a disadvantage in the marketplace.
- 3.16. Once a quantum of resource is determined a second question of equity emerges. How should Ukraine answer the normative or political question of whom to allocate (ration) limited affordable housing resources⁷? Many defensible screening or scoring mechanisms can be defined and have been used around the world, including valuation accorded to factors such as damage and injury incurred, households' wealth and income, 'key worker' categories, the size of the government funding pot relative to aggregate political demand etc.
- 3.17. The distribution of affordable housing benefits always core policy choices in which either position is defensible, such as the following:
- a. *Most needy or most served?* Allocating limited resources to the poorer/ poorest households can be justified because these households have the least chance to find market solutions; allocating them more broadly can be justified as costing much less per household and likely generating more economic additionality.
 - b. *Value lost or housing delivered?* Restoring the status quo ante would compensate households according to the value of the damage they have suffered, which would favor richer households over poorer ones, city dwellers over towns, and urban over rural residents. A safety-net approach of getting everyone into acceptable permanent accommodations may give some households more than they had before, and other households less.
- 3.18. Resolving these is an issue of normative beliefs rather than positive economics. The need for diversifying income levels within communities asserted in the next section makes this a question of balance rather than maximization.

⁶ This is a flaw in those models, but they are widely used.

⁷ Housing is only affordable everywhere in markets that have effectively infinite land at low cost, and no costs on either municipal infrastructure or vertical density. Everywhere else – which is most of the developed world already – land-use and land-development economics work so that a rising economy creates a quantum of housing unaffordability. Paradoxically, the faster the urban economy grows, the more important it is for government to have constructive responses and automatically scaled or adjustable affordability resources.

- 3.19. Thirdly, both equity and market dynamics issues could emerge over rent regulation. Where (newer) affordable homes are of much better quality than pre-existing units in the same market, and the rent of the newer homes is nevertheless set lower than existing stock due to affordable housing programme rules, there is the potential for political dissatisfaction as well as market distortions. Accordingly, an affordable housing policy will need to address the potential for local inequities, either at the time of delivery or later as market change and program rules apply over many years.
- 3.20. A final question arises over the selection of investors, suppliers and construction companies. A preference for the domestic over the foreign is understandably hard-wired into our responses. However, capacity and time pressure work against this. It will be important that affordable housing supply policy is designed to turn a seemingly zero-sum game between domestic and foreign enterprises into a positive-sum relationship, where comparative advantages can be used to increase overall efficiency and hence the total amount of Ukraine that can be reconstructed better and more speedily. In particular, there is a strong policy case for giving explicit preference to consortia that combine regional or global platform power with domestic knowledge, workforces, and motivation. Eventual bottlenecks of machinery, state-of-the-art technology, and affordable housing domain expertise can be solved by the foreign partner, with the local workforce involved up and down the organogram⁸, well employed, contributing local knowledge, and building domestic capacity⁹. Over time the smaller domestic companies will grow up into national or regional players.

D. Spatial considerations

- 3.21. At a city level, some rules of thumb can be derived from European experience about what percentage of houses should be affordable, taking into account demographic and (income/wealth) inequality characteristics of the population. In the case of Kyiv, Kharkiv, Chernihiv, Sumy, or other big cities where a large part of the population will have to be encouraged to return, a good working assumption would be to apply this percentage of housing projects to the current (pre-war) population.
- 3.22. In the most damaged areas (Donbas, Kharkiv, etc.), Ukraine's urbanization was already very high (close to 90%) before the war. Despite the hundreds of thousands of casualties, this terrible toll does not significantly reduce the total size of the population (though it may well alter the types of housing needed and migration may alter where the housing is needed). Multiple other factors (e.g. universities, domestic military bases, absence of shelling damage) will influence which cities become the strongest immigration magnets. It is probable that most will still want to live in cities after the war. In any case, moving to the countryside in large numbers is not a credible option. However, many refugees

⁸ This approach already exists in Ukraine, and the enabling legislation is favourable for such combinations.

⁹ There are already strong local and regional players eager to tap public financing. Conversely, policymakers need to incubate a growing and diversified industry, and even if speed is important, adopting a 'too small to compete' barrier that would limit funding to bigger players would inhibit innovations and divide the postwar recovery into a handful of big-get-bigger winners that separate themselves from aspiring companies that never achieve visibility or scale.

and Internally Displaced Persons (IDPs) may well not want to return to their city of origin and seek to relocate into western Ukraine. We can expect that some western and southern Ukrainian cities (e.g. Lviv, Ivano-Frankivsk, Chernivtsi etc.) may grow significantly after the war, especially if they are natural nodes for European businesses and services entering Ukraine. Therefore, the case for constructing affordable housing there would be less about attracting returnees and more about meeting housing need where it has internally migrated to, potentially leaving behind either stranded-cost housing or areas so badly damaged they need to be demolished and returned to greenfield use.

- 3.23. Military defense considerations will certainly dominate in some locations: wherever the army will want to set a military base, there will be one, and that base will generate a large multiplier of off-base jobs that support the on-base military and civilian workforce. Other supporting services and homes for their families will have to evolve/be provided.

E. Community diversity and social mix

- 3.24. Building homes is easier than attracting long-term employers: wherever an investor is willing to start or resume the production in a significant plant, that company should be given all necessary public support in terms of infrastructure, i.e. renovation or upgrading of infrastructure should be prioritized in areas where employers expand their activities. Nevertheless, as much as possible no community should be completely dependent on a single large private employer, and those that were single-industry towns before the war should be consciously diversified as much as possible. As no affordable housing project can support the cost of building its own infrastructure network from scratch, these 'employer-induced' infrastructure projects can be the triggers for affordable projects. At the same time, if new jobs are created and land use and urban growth are left entirely to market forces, affordable housing will be priced out of better locations and exiled to the periphery. The resulting new community will have a high-income enclave and nearby lower-income economically excluded neighbourhoods. For this reason, affordability must be consciously mixed in from the beginning of the redevelopment.
- 3.25. A key output of affordable housing policy will be the creation of diverse communities where, as far as possible, factors such as age, gender, income and household type reflect the broader society. The policy should strive to avoid the creation of monolithic 'miner towns' where 90% of residents are working for the same employer, and when these legacy towns are redeveloped, economic diversification must be a priority.
- 3.26. Ensuring that affordable housing contributes to national economic recovery will mean that it may not always be built where land is cheapest. To avoid employment bottlenecks, affordable housing may also need to be constructed where land prices are bid up by competing uses to share out land across the range of incomes.
- 3.27. European affordable housing programs are crucial in meeting the housing needs of economically inactive people. However, in the early phases of reconstruction there will

be a tradeoff between economic and social goals which the government will need to negotiate.

- 3.28. Equally, the government will need to determine the role affordable housing plays in supporting veterans (both those that have retired from military service, and others who will make soldiering a career). Clearly, veterans suffering physical or mental ill health are likely to need affordable housing. However, to avoid adverse concentrations, the programs should seek to integrate this housing as far as possible in broader communities. Provision of training and service support may need to be combined with housing where reintegration into the labor market is necessary.

F. Cultural heritage and planning considerations

- 3.29. There are important questions to be resolved over the future design of Ukraine's towns and cities. Although it may be most cost-effective, over the total life cycle to demolish many legacy buildings and rebuild new on the same site, many other buildings are cultural and social assets whose preservation has powerful symbolic value in motivating people to return, to rebuild, and to revive their city. A new network of streets might not be desirable for previous occupants as it may not match their business models.
- 3.30. Similarly, the post-1945 practice of supplying affordable housing quickly and relatively cheaply via multi-storey blocks could well lay the foundation for future social problems. Britain and France, to name two countries, eventually tore down scores of such high-rise blocks that had become isolated warrens of unhappiness.
- 3.31. Unfinished market properties, or those that were partially sold before the war and have many empty units remain unsold, could potentially be 'bought into affordability' through appropriate discount pricing and regulatory agreements.
- 3.32. Public space amid high-density urban living may cost up front, but in the long run it produces better, more livable, and more viable cities and citizens.
- 3.33. Local knowledge and engagement is vital. Municipalities will have to play a key role in determining the distribution, design etc. of affordable housing to match their needs.

G. Technical considerations

- 3.34. New affordable housing should not be temporary construction. Although there is a strong tendency to use 'container units' right away as they can be quickly transported in, temporary quickly morphs into permanent, especially if it eases the policy pressure to find the promised replacement solution. In the UK, for example, a few temporary post-World War 2 prefabricated homes are still in use 65 years after their projected lifespan. Affordable housing will need to be durable for a succession of occupants.
- 3.35. In most cases, the remnants of underground public utility networks (sewage, gas, water etc.) are cheaper to be repaired than to be completely replaced. This makes brownfield redevelopment ultimately cheaper.

- 3.36. Just as location is permanent, bad initial construction is almost as permanent. Poor quality homes cannot be later converted into good quality houses at a sensible cost, hence cutting costs on new build affordable housing will ultimately be a waste of resources- creating a much greater housing bill for future governments to pay.
- 3.37. Efficiency and speed can be increased if there are somewhat flexible, but ready-made plans for affordable houses/ neighborhoods. Likewise, a one-stop shop for the socially costly technical licensing process should be performed only once.
- 3.38. Construction material may be a bottleneck during reconstruction, especially if too many projects are started at the same time. The consequences could be cost-push inflation (labor and inputs), unfinished development projects blotting the landscape and discouraging investment. In part, this problem can be mitigated by appropriate regulation of the construction material market. However, sequencing will be necessary, and distributing manufacturing or power generation capacity will be part of 'hardening the economy' against both market forces and potential future aggressors. Likewise, home-sourcing technological manufacturing or mining of critical minerals, ore, and energy sources will have benefits in both economics and national security.

H. Sequencing

- 3.39. Speed is of the essence. However, given the various constraints an optimal solution will entail sequencing. For example, the need to avoid rampant construction inflation mentioned above implies national government coordination to prioritize reconstruction projects and their linkage to infrastructure repair. But transparency should not be the enemy of speed: abandoning transparent and competitive public procurement through electronic platforms (e.g. Prozorro) could result in a return to the days of sweetheart or insider procurement resulting in higher prices or poorer quality. Transparency also helps mitigate the risk of never-ending takings or due process litigation, which in other countries has massively delayed critical urban redevelopment, or in some cases derailed it altogether.
- 3.40. Affordable housing eligibility may have to broaden gradually. Some groups may have political priority (e.g. veterans). Some may enjoy economic imperatives (e.g. key workers). There is an economic logic that points to ensuring that the affordable housing programme makes the greatest contribution it can to the recovery.

4. The limits of an affordable housing policy's influence

A. The exogenous factors: Things largely beyond Ukraine's control

- 4.1. Where Ukrainians choose to live after the war and, therefore, where affordable housing will need to be located is largely an exogenous factor beyond the government's control. However, the government can influence the population's decisions *at the margin*.
- 4.2. *Overall*, the spatial distribution of the population is essentially exogenous. Existing infrastructure like river crossings, ports, border cities cannot be moved and so will determine where investment will need to occur. Population *movement* is also largely exogenous – especially if EU Article 21's right to free movement were applied to Ukrainians on some future date when Ukraine is admitted to the EU¹⁰. Conversely, once the war ceases, the flow of refugees back to Ukraine (if not necessarily back to their prewar dwellings) will rapidly increase. This will be mediated by winter and Ukraine's ability to absorb returnees.
- 4.3. Construction capacity is also probably exogenous in the shorter run, but with international help and the training of differently skilled people the capacity can be significantly increased.

B. Endogenous factors: Factors more amenable to influence

- 4.4. Notwithstanding the weight of the foregoing factors, national government can influence where and when affordable housing may be needed.
- 4.5. Migration, whether external or internal, can be influenced by coherent and well communicated policies (e.g., credible promises that are delivered on) as well as perhaps financial incentives. Housing availability will play its part too.
- 4.6. Some specific non-housing policy choices can have profound impacts on population distributions at a micro level. Decisions about where new military bases are to be located or where mining occurs will determine where housing will be needed.
- 4.7. The same is true about decisions on transport infrastructure. For example, building super highspeed lines linking Kyiv to Lviv and Odesa will confer an economic absolute advantage on the places linked, especially where access to European markets is enhanced. By the same token, reconfiguration of the Ukrainian railway system to European standards (most notably narrower track width) will create a hierarchy of economic advantage between places that will have impact on the demand for housing.

¹⁰ The potential disruptive effect of having millions of Ukrainians able to travel and work freely throughout the EU, on Ukraine's economy and in some cases on other European countries' economies might defer Ukraine's admission but could also be addressed by admitting Ukraine soon and deferring Ukraine's effective date for activating Article 21t.

Whether affordable housing is used to meet need in the growing settlements or enhance the places that are economically disadvantaged is a political choice.

- 4.8. Ukraine's internal politics will inevitably play a role in the allocation of resources for rebuilding damaged cities versus expanding undamaged ones. Aside from humanitarian and policy considerations relative to helping those most disrupted by the war, these choices of resource-location are inherently political and to some degree zero-sum. The experience of German reunification has not all been positive in this respect, but not addressing residents' expectations on where they can live could be more problematic (e.g. in terms of social cohesion).
- 4.9. In normal times, building housing in cities is to a large extent a problem of coordination and co-location with other urban building initiatives. Jobs, infrastructure (including energy, education, and health) and labor force have to be combined both in quality and quantity. Probably jobs are slightly 'more important', but labor force and infrastructure are mutually dependent – housing is where jobs go to sleep at night – and neither is more exogenous than the other. There are many ways to facilitate this coordination, and probably Ukraine should experiment with several options. One possibility would be to form regional development councils based on transparent agreements and mutual accountability. Mandates and incentives for both employers and financial institutions to devote a portion of their activity to affordable housing can also have a similar effect. Completing decentralization reform will facilitate this: the more a municipality is able to operate as a financially autonomous entity, including its own revenue sources, budget accountability, and access to the capital markets, the more credible, effective, and democratically accountable it will be.
- 4.10. Movements in international input prices will set the tone. However, the market for construction materials has to be sensibly managed and regulated if housing and construction are to be effective contributors to broad-based recovery and urban renewal.

5. Some trade-offs and complementarities

- 5.1. Inevitably, the usual contradictory triangle of *fast, good or cheap* applies and an effective policy will need to establish trade-offs with best practice.
 - Well thought-through and detailed plans cannot be provided quickly. Circumstances can (and will) change. Hence plans have to be adjusted and that cannot be done quickly with enough detail. Planning should start with custom-designed solutions based on international good practice, followed by simultaneous experiments in multiple municipalities and then both peer-to-peer idea exchange and some competitive awarding of discretionary resources.
- 5.2. International donors will probably prefer high quality, brown-field projects with state-of-the-art placemaking solutions. This reduces the conflicts between technical efficiency and meeting international requirements. The same is true for transparency and the fight against corruption.
- 5.3. Policy tensions may emerge for example, over the priority of housing for differing social groups (especially if there is pressure to repatriate refugees as soon as possible). Equally, balances will need to be struck between preferences for domestic and foreign investors/ construction companies. These matters are inherently political to each country, oblast, or metropolitan area, but some (e.g. veterans, the elderly) should have nationally consistent definitions.
- 5.4. The need to rehouse so many people means that some compromises will be necessary. “The best is the enemy of the good”: designing and implementing ‘best practice’ solutions to meet the local circumstances would require too much local detail, too much analytical capacity and take too long, especially as Ukraine’s circumstances are unprecedented in the world. More generic and flexible solutions that still meet *good practice* will be necessary, provided that there are regular and candid peer-to-peer exchanges and potential for rapid evolution.
- 5.5. Green technology can be value-additive in a total lifecycle cost basis, provided that financing incentives (e.g. green loans from European countries) and ongoing savings (e.g. lower energy cost, longer lifespan) are considered, and further provided that the country’s inflation and cost of borrowing are brought down to developed-nation levels.

6. Possible approaches to speed delivery of affordable housing

- 6.1. Delivering affordable housing will be a complex multi-faceted challenge. Many activities could, and probably should, be started simultaneously to develop momentum, as follows.
- 6.2. A number of baseline (policy-off) scenarios should be developed for the spatial distribution of the population and jobs in the coming years. Based on these scenarios, the minimum number of affordable houses needed in various cities can be estimated. If the results of the most realistic baseline scenarios turn out to be undesirable, then the next step will be to clarify the wider public policy objectives.
- 6.3. Based on the points in this paper, principles and procedures should be established for the conditions when and where some form of an affordable housing project can be launched. These principles and procedures will have to take into account:
 - the socially preferable allocation of resources
 - the optimum sequencing
 - the channeling of local information into decision making
 - material and labor force capacity constraints of the construction market
- 6.4. From a practical perspective, it would be helpful for groups of experts (architects, urban planners, sociologists, etc.) to develop 'ready-made' templates for various orders of magnitude of affordable housing. For instance, there could be 10 different templates for properties that would have 10-50 households, a similar number for 50-300, and then modularized master plan approaches for communities involving multiple properties and multiple uses. Each plan should be able to flex to meet specific local circumstances. The plans would have been developed with the relevant licensing and regulatory authorities to speed implementation.

The plans would have to take into account:

- the state-of-the-art principles of urban planning and
 - the typical preferences of international donors
- 6.5. A small number of legal-financial-governance models should be developed with (almost) ready-made template/ model contracts and which meet regulatory requirements and are based on the industry leading examples, such as FIDIC. This would obviate the need for lengthy negotiations among the participants (involving many expensive consultancy hours) where municipalities wanted to start an affordable housing project (with central government approval) that fitted one of the templates.

The legal-financial-governance models would have to be developed across three distinct areas in order to

- deliver incentives for all participants
- allocate risks in a way that protects fiscal sustainability
- prevent corruption.

6.6. Conceptually dividing the problem into three component areas has several advantages, at least for program design to:

- Simplify discussion by bundling multiple challenges into relevant areas
- Allow for progress to progress in parallel
- Channel political debate into topic areas that might proceed at different rates.

It is even possible that such a modular approach might allow for small and medium size pilot projects to be started before ‘the end of the war’ without needing a final political decision about the overall shape of the programme. This could allow for lessons to be learned and necessary finetuning of the ‘from the shelf’ products to be done before the accelerator is pressed on the country’s reconstruction when peace arrives.

7. Conclusions

- 7.1. The challenges facing the provision of housing (both affordable and market) in Ukraine are enormous – but surmountable.
- 7.2. Many factors are exogenous and will set the context for the delivery of affordable housing. However, Ukraine has the capability to determine much about the quantum and distribution of affordable housing in the coming years.
- 7.3. Delivering a successful affordable housing policy will require the acceptance of key principles such as:
 - compromises will be necessary, e.g., the uptake of brown and greenfield land will be driven by pressure from factors like time and money;
 - affordable housing policy will not be able to resolve all issues, e.g., where people want to live and where businesses wish to invest.
- 7.4. Government will need to set the foundations for a vibrant affordable housing sector now. Key features for an affordable housing policy would include developing:
 - a set of scenarios for post-war population distribution (returnees, IDPs, and new population growth);
 - a toolkit of ready-made options for different scales of affordable housing development, including technical and governance aspects;
 - piloting of the options;
 - dividing the problems of detail into relevant component groups to allow for parallel processing.
- 7.5. Affordable housing is where essential jobs go to sleep at night; it is where the next generation of leaders grow up, and it is where the generation of heroes enjoys the benefits of peace and eventual happy retirement. Affordable housing is critical to the reconstruction and modernization of Ukraine's housing, economy and indeed, its society. For this to happen, affordable housing policy must be embedded nationally and locally before 'the end' of the war.