The Role of Affordable Housing in Creating Jobs and Stimulating Local Economic Development:

A Re ie of he Li era re

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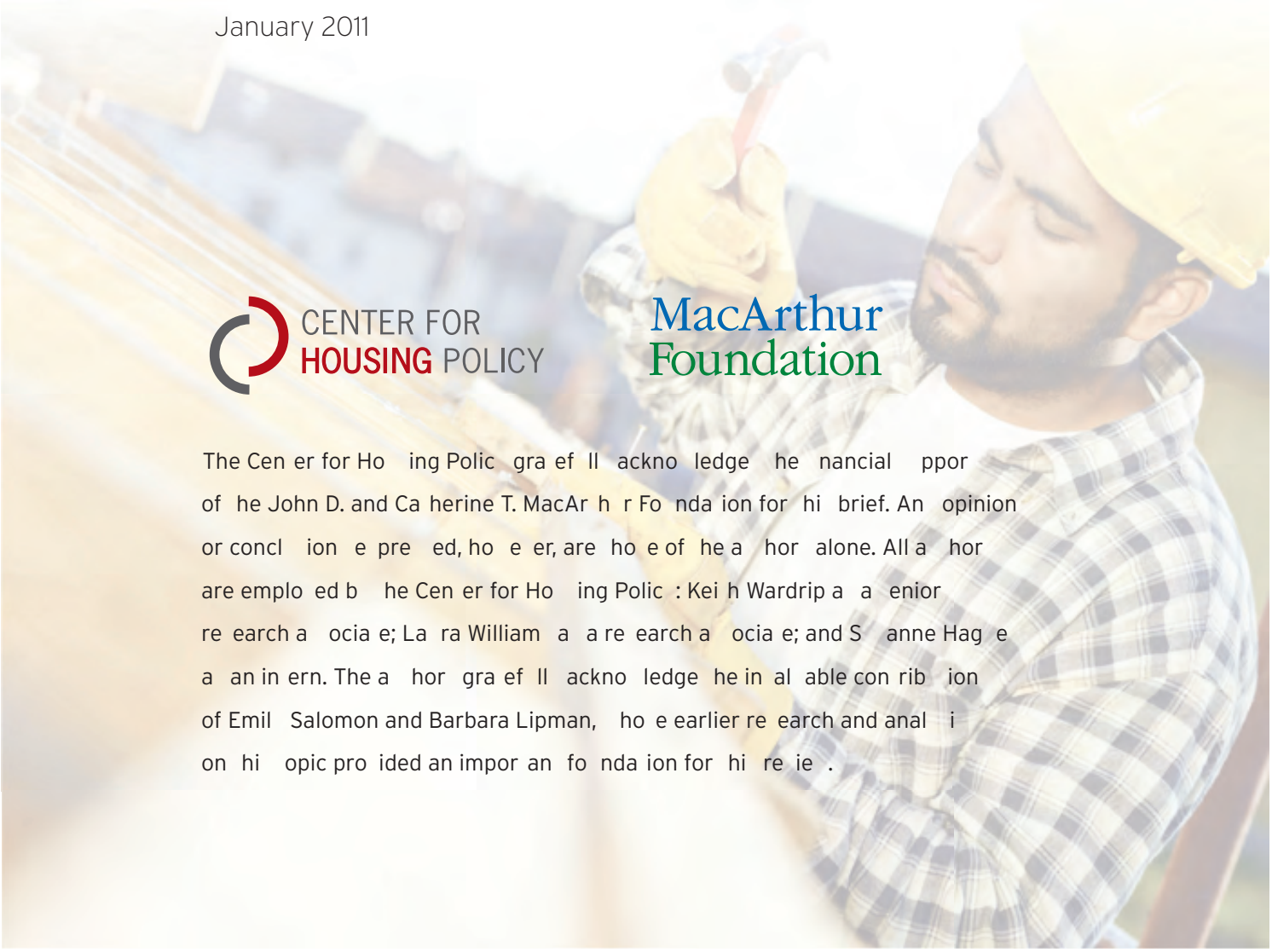


CENTER FOR HOUSING POLICY

MacArthur Foundation

The Cen er for Ho ing Polic gra ef ll ackno ledge he nancial ppor of he John D. and Ca herine T. MacAr h r Fo nda ion for hi brief. An opinion or concl ion e pre ed, ho e er, are ho e of he a hor alone. All a hor are emplo ed b he Cen er for Ho ing Polic : Kei h Wardrip a a enior re earch a ocia e; La ra William a a re earch a ocia e; and S anne Hag e a an in ern. The a hor gra ef ll ackno ledge he in al able con rib ion of Emil Salomon and Barbara Lipman, ho e earlier re earch and anal i on hi opic pro ided an impor an fo nda ion for hi re ie .

Co er pho o : op, Sh er ock; bo om, Lion Creek Cro ing , Oakland Ho ing A hori . Pho o co r e P a ok Archi ec . Frank Domin Pho ograph .

Exploring the Intersection of Affordable Housing and Local Economic Development

Ho ehold i h mode mean need afe, i able ho ing ha he can afford. When ho ing i affordable, lo - and modera e-income familie are able o p n ri io food on he able, recei e nece ar medical care, and pro ide reliable da care for heir children. Re earch ha ho n ha he abili of an affordable mor gage or ren can ha e profo nd effec on childhood de elopmen and chool performance (L bell and Brennan 2007) and can impro e heal h o come for familie and indi id al (L bell, Crain, and Cohen 2007).

B he bene of affordable ho ing e end be ond i occ pan o he comm ni a large. The re earch re ie ed in hi brief demon ra e ha he de elopmen of affordable ho ing increa e pending and emplo men in he rro nding econom , ac a an impor an o rce of re en e for local go ernmen , and red ce he likelihood of foreclo re and i a ocia ed co . Wi ho a f cien ppl of affordable ho ing, emplo er and en ire regional economie can be a a compe i i e di ad an age beca e of heir b eq en dif c l a rac ing and re aining orker . In addi ion o he e pro en linkage be een affordable ho ing and economic de elopmen , hi re ie al o di c e e eral promi ing h po he e ha ha e no e been a ell re earched b ha none hele gge a in hich affordable ho ing can fo er local economic gro h.[1]

AFFORDABLE HOUSING ake man differen form , and hi re ie e he erm broadl o encompa all ho ing de eloped a le el affordable o lo - and modera e-income ho e-hold . Mo of he program (e.g., he Lo -Income Ho ing Ta Credi Program, do n pa men a i ance program , comm ni land r , p blic ho ing, e c.) e a b id o bring ho ing co do n o belo marke ra e and in-line i h ha lo - and modera e-income ho ehold can afford. Ho e er, hi re ie al o con ider he impac of program and policie ha red ce ho ing-rela ed e pen e (ch a energ and ran por a ion co) or ha pro ide o nd, n b-idi ed mor gage prod c o lo - and modera e-income ho ehold .

[1] Thi brief de ne local economic de elopmen a gro h in local con mer ac i i , emplo men oppor ni ie , and pri a e-marke in e men . Al o incl ded in hi brief are affordable ho ing cal effec (i.e., he impac on a m nicipali a ba e) ha can be direc l linked o he de elopmen or long- erm pre ence of affordable ho ing. Al ho gh igni can , hi brief doe no in e iga e bene o ho e li ing in he affordable ho ing i elf, e en ho e ha are economic in na re, beca e he foc of hi paper i on demon ra ing he comm ni ide impac of hi impor an a e .

Pho o b Jack on Smi h, co r e of NHT/En erpri e Pre er a ion Corpora ion

1. The Initial Development of Affordable Housing Creates Both Immediate and Long-Term Employment Opportunities and Spending in the Local Economy

SUMMARY: *As with market-rate housing, research consistently shows that developing affordable housing creates jobs – both during construction and through new consumer spending after the homes have been occupied. The impacts of building certain kinds of affordable rental housing are on par with the impacts of comparable market-rate units.*

Modeling economic activity and employment: Re earcher , prac i ioner , and ho ing ad oca e ha e a arie of idel ed inp /o p ⌐ model i h hich o e ima e he emplo men effec of b ilding affordable ho ing.[2] U ing inp ⌐ ch a informa ion on he p rcha e and prod c ion of good and er ice for h ndred of U.S. ind r ec or , he pe and n mber of b ine e abli hmen in a local econom , and a mea re of direc pending for a gi en program, he model o p ⌐ he le el of economic ac i i e pec ed o re l from he in e men . In mea ring economic ac i i , he e model incl de no onl he direc pending a ocia ed i h he ho ing con r c ion or rehabili a ion i elf, b al o pending b pplier (indirec effec) and he pending of age in he local econom b ho e emplo ed direc l and indirec l (ind ced effec).[3] In addi ion o he o al economic ac i i , he model al o e ima e he n mber of ne local job ppor ed b he ac i i , he age paid b he ne job , and he a e ha can be e pec ed o o o ario le el of go ernmen .

Research based on these economic and employment models: U ing he ame model ha h ndred of local j ri dic ion ha e ed o q an if ho ing con r c ion impac i hin heir border , a repor p bli hed b he Na ional A ocia ion of Home B ilder (2010) demon ra e he impac of b ilding 100- ni Lo -Income Ho ing Ta Credi (LIHTC) de elopmen for familie and enior in a pical me ropoli an area ing na ional a erage a model inp (e.g., marke al e , land co , a e , fee). The Na ional A ocia ion of Home B ilder e ima e ha b ilding 100 ne LIHTC ni for familie lead o he crea ion of 80 job from he direc and indirec effec of con r c ion and 42 job ppor ed b he ind ced effec of he pending. For he enior de elopmen , here ni are picall maller, ligh l fe er job are crea ed (ee Table 1).

DIRECT, INDIRECT, AND INDUCED EFFECTS OF HOUSING CONSTRUCTION

D ring he con r c ion of affordable ho ing or an kind of ho ing, for ha ma er he local econom bene direc l from he f nd pen on ma erial , labor, and he like. If he b ilder i p rcha ing indo and door from a local pplier, he pplier ma ha e o pend mone on ma erial and hire addi ional help o comple e he order e ample of indirec effec . Finall , he con r c ion orker , gla c er , and land caper are likel o pend a por ion of heir age a he local grocer ore or hopping mall, hich ill ra e ind ced effec . Taken oge her, he indirec and ind ced impac of ho ing con r c ion on he local econom are of en called ripple⌐ or m l iplier⌐ effec . The e effec are ma imi ed in locali ie here con r c ion-rela ed pplier and o her b ine e ab-li hmen are pre alen . In locali ie i h li le ind r , re ail, or er ice , job crea ion ill occ r b i i more di per ed beca e he indirec and ind ced pending leak ⌐ o o her j ri dic ion .

[2] The mo common are he Impac Anal i for Planning (IMPLAN) model, he Regional Inp -O p Modeling S em (RIMS II), and he proprie ar model de eloped b he Na ional A ocia ion of Home B ilder .

[3] To al economic o p cap re direc , indirec , and ind ced ac i i and i mea red a he co of ma erial and he al e added o ho e ma erial (i.e., age paid o laborer , pro , in ere , and indirec b ine a e). For a de ailed di c ion of o p peci c o he IMPLAN model, ee Hangen and Nor hr p (2010). To al economic o p can al o be ho gh of a he gro ale re l ing from he ini ial capi al o la , incl ding he o la i elf (Minne o a Ho ing Finance Agenc 2009).

In addi ion o he e real- ime job and economic ac i i , b ilding 100 LIHTC famil ni al o lead o he long- erm crea ion of 30 ne job ha ppor he ongoing con mer ac i i of he e home ne re iden . For 100 enior ni , an e ima ed 32 job are crea ed in re pon e o ne con mer demand.[4] For bo h de elopmen , he Na ional A ocia ion of Home B ilder e ima e ha ne re iden o ld genera e earning for local b ine o ner and emplo ee in e ce of $2 million ann all . Table 1 mmari e he job crea ion po en ial of he e LIHTC projec and ho ha heir effec on he labor force i comparable o ha of a imilarl i ed marke -ra e proper .

TABLE 1. Number of Jobs Created During and After the Construction of a 100-Unit Multifamily Property

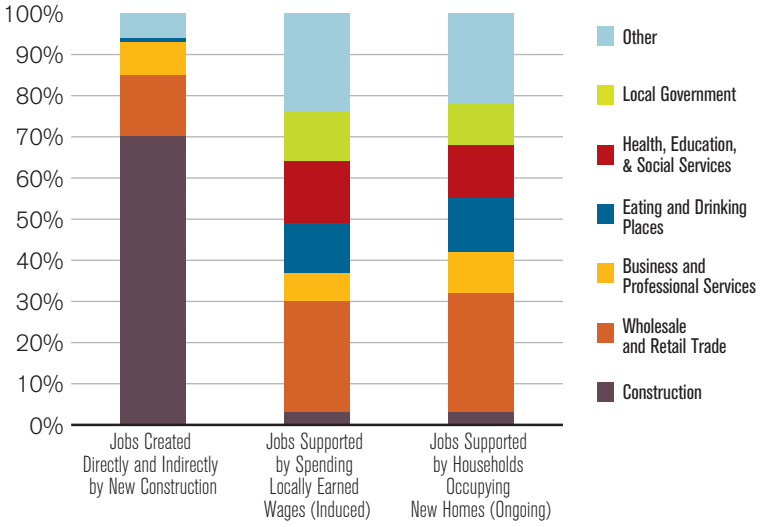
	Family LIHTC	Senior LIHTC	Market-Rate Apartments
Job Crea ed Direc l and Indirec l b Ne Con r c ion	80	75	80
Job S ppor ed b Spending Locall Earned Wage (Ind ced)	42	39	42
Job S ppor ed b Ho ehold Occ p ing Ne Home (Ongoing)	30	32	32

Source: National Association of Home Builders, 2010 and 2009a

A Fig re 1 ill ra e , he pe of job crea ed direc l and indirec l from he con r c ion of a LIHTC proper ar con iderabl from ho e ppor ed b he increa ed b ing po er of ho e in ol ed in he con r c ion (ind ced effec) and he demand for good and er ice of he ho ehold ha occ p he ne home (ongoing effec). No rpri ingl , job re l ing from he direc and indirec effec are predominan l in con r c ion, herea ind ced and ongoing economic ac i i ie increa e emplo men in hole ale/re ail rade, heal h and ed ca ion, and ea ing and drinking e abli hmen .

[4] De pi e he lo er income of he older re iden , he ongoing emplo men impac for he enior LIHTC b ilding e ceed ho e for a famil LIHTC proper , and are iden ical o e ima e de eloped for a marke -ra e m l ifamil proper , beca e older ad l are more likel o pend heir income locall , par ic larl hen Medicare pa men for heal h er ice are aken in o acco n (Na ional A ocia ion of Home B ilder 2010, 2009a).

FIGURE 1. Types of Jobs Created During and After the Construction of a 100-Unit Family LIHTC Property



Source: National Association of Home Builders, 2010

The Na ional A ocia ion of Home B ilder die pre en ed h far effec i el ill ra e ho he de elopmen of affordable ho ing can affec a local econom , b beca e he are na ional in cope, he do no appl o an par ic lar region. Follo ing are e ample of he differen a in hich re earcher ha e ed imilar economic model o demon ra e he bene of affordable ho ing con r c ion o peci c locali ie :

- U ing a model o e al a e ho ing bond e pendi re in Rhode l land, Hangen and Nor hr p (2010) e ima e ha $25 million in bond ca al ed more han $200 million in con r c ion rela ed-e pendi re and led o he de elopmen of 582 affordable ren al and o ner-occ pied home in cal ear 2007 and 2008. Incl ding indirec and ind ced effec , he e ho ing bond helped genera e almo $400 million in economic ac i i in he a e. Thi economic ac i i incl ded $149 million of age paid o he emplo ee lling he 3,060 job crea ed or ained b hi in e men in affordable ho ing.
- A d cond c ed b he Minne o a Ho ing Finance Agenc (2009) ho ha he $260.6 million in e ed in affordable ho ing con r c ion, rehabili a ion, and ren al a i ance

Econsult (2009) estimates that for every dollar spent by a proposed Pennsylvania state housing trust fund on remodeling or rehabilitating an existing home, an additional $1.28 of indirect and induced spending would occur.

o er a o- ear period (Ma 2006-Ma 2008) le eraged an addi ional $471.1 million in p blic and pri a e f nd for hi ame ac i i . In o al, he $731.7 million in direc pending genera ed an addi ional $0.91 on he dollar in indirec and ind ced pending, for a o al of nearl $1.4 billion in o al economic ac i i . Thi le el of economic ac i i ppor ed nearl 10,700 job in Minne o a o er he o- ear period.

- Econ l (2009) e ima e ha for e er dollar pen b a propo ed Penn l ania a e ho ing r f nd on remodeling or rehabili- a ing an e i ing home, an addi ional $1.28 of indirec and ind ced pending o ld occ r. The m l iplier effec for m l ifamil ($0.69) and ingle-famil ($0.62) con r c ion are lo er b ill b an ial.[5] In erm of i impac on emplo men , an here from 14 o 20 job o ld be crea ed for e er $1 million in ho ing r f nd dollar pen in he a e.

- Zielenbach, Voi h, and Mariano (2010) anal e he one- ime economic impac of nine HOPE VI[6] i e acro he co n r . In o al, he direc , indirec , and ind ced economic ac i i a he nine i e ranged from $29.9 million in Kan a Ci o $246.6 million in Sea le. A hare of hi economic ac i i ake he form of age for local orker , and he a hor e ima e ha he n mber of ne job ppor ed d ring rede el- opmen ranged from 76 (Kan a Ci) o 786 (Sea le) for he nine projec .[7]

- Re earch in o he economic bene of p blic ho ing in 10 large me ropoli an area nd ha for e er dollar of direc federal pending on capi al and main enance, an addi ional $1.12 in indirec and ind ced e pendi re i genera ed b pplier , endor , and age-earner . On a erage, he e e pendi re ppor 244 job in each me ro area (Econ l 2007).

A n mber of die ha e al o e amined he economic impac of he e pendi re dedica ed o opera ing a oppo ed o b ilding and main aining b idi ed ho ing de elopmen once he are con r c ed. For e ample, in addi ion o i nding rela ed o capi al e pendi re , Econ l (2007) e ima e ha e er dollar of p blic ho ing opera ing e pendi re genera e an addi ional $0.93 of economic ac i i in he local marke , and ongoing p blic ho ing opera- ion ppor an a erage of 1,187 job in each me ro died. Wood (2004) in e iga e he economic and emplo men effec of non-con r c ion federal and a e ho ing b idie in U ah b cla if ing a income he $61.4 million paid b he Uni ed S a e Depar men of Ho ing and Urban De el- opmen (HUD) (in he form of o cher a i ance and opera ing and capi al f nd) o landlord and o her ho ing pro ider in 2003. Wood e ima e ha hi pending ran la e in o $17.2 million in direc , indirec , and ind ced age in he U ah econom and ppor 1,100 job . Similarl , he a hor co n he a e $6.2 million in do n pa men a i ance a income o recipien ho ehold , hich, hen pen in U ah, ran la e in o ro ghl $2.4 million in earning and 95 job in he a e econom .

[5] The m l iplier for remodeling/rehabili a ion i higher han for ne con r c ion ac i i ie beca e in he former, a grea er hare of o al f nd i pen on local labor, herea in he la er, more f nd are pen on ma erial of en prod ced o ide of he j ri dic ion. In o her ord , f nd are more likel o leak o o her comm ni ie hen he are pen on ne con r c ion han hen he are pen on rehabili a ion.

[6] HOPE VI i a federal program ha f nd he re i ali a ion of di re ed p blic ho ing.

[7] Zielenbach, Voi h, and Mariano (2010) al o compare he ongoing economic impac of opera ing he rede eloped b idi ed ni i h he e ima ed impac of opera ing he p blic ho ing before he HOPE VI rede elopmen . In ca e here ongoing federal co o opera e he HOPE VI projec ere lo er han before he rede el- opmen , he ongoing economic impac of he rede elopmen proce i ligh l nega i e.

Hill S ree S dio /Ge Image

Ano her d ake a differen approach al oge her. Ra her han foc ing on he impac of capi al or opera ing e pendi re on a local econom , a d of orkforce ho ing demand in Minneapoli and S . Pa l foc e on he economic impac ha orking familie co ld ha e on he region if affordable ho ing ere a ailable for hem o b or ren (Ma eld Re earch Inc. and GVA Marq e e Ad i or 2001). The a hor begin b e ima ing ha he region need o add 5,000 ni o mee i pen - p demand for orkforce ho ing, and ha if i b il he e ni , i o ld crea e re iden ial oppor ni ie for orking ho ehold ho canno c rren l afford o mo e o he region. B making ome er ba ic a mp ion abo he n mber of orker in each ho ehold, he income ha each orker o ld earn for local emplo er , and ho m ch each o ld pend in he local econom , he a hor e ima e ha b no pro iding affordable ho ing for he e po en ial ho ehold , he region mi e o on $128 million in con mer pending, and local b ine e forego $137 million in income ann all beca e po i ion go n lled.

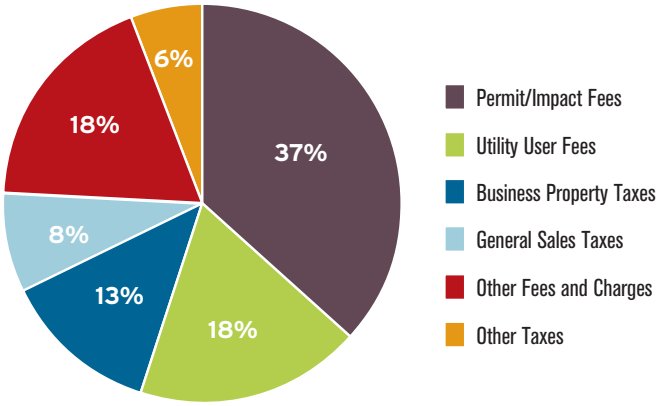
2. The Development and Rehabilitation of Affordable Housing Provides Immediate Fiscal Benefits for States and Localities

SUMMARY: *Cities and states benefit financially from the development or substantial rehabilitation of affordable housing. Some of the most significant sources of revenue during the construction or rehabilitation phase are sales taxes on building materials, corporate taxes on builders' profits, income taxes on construction workers, and fees for zoning, inspections, and the like.*

Modeling one-time fiscal benefits: The cal effec of he con r c ion of affordable ho ing ar from place o place depending on local a r c re , con r c ion co , de elopmen fee , and he her he local mi of ind rie i cond ci e o cap ring con r c ion-rela ed ac i i . A i h he economic impac e ima e di c ed abo e, he cal effec di c ed in hi ec ion are largel deri ed from one of he inp /o p model , hich are ba ed on ac al, ind r - peci c p rcha ing and prod c ion ac i i ie and adj ed o acco n for local aria ion .

The Na ional A ocia ion of Home B ilder (2010) e na ional a erage o e ima e ha local j ri dic- ion and o gain ro ghl $827,000 in immedia e re en e from he con r c ion of 100 LIHTC famil ni and ro ghl $768,000 hen 100 LIHTC enior ni are b il .[8] A Fig re 2 ho , permi ing/impac fee and ili er fee repre en more han half of all local go ernmen re en e a ocia ed i h he con r c ion of a 100- ni LIHTC proper for familie .[9] The e e ima e pro ide an impor an na ional ba eline for he co n r mo proli c affordable ho ing prod c ion program b , gi en local economic and projec n ance , canno be direc l applied o an peci c ho ing marke or projec .

FIGURE 2. One-Time Sources of Local Revenues for a 100-Unit Family LIHTC Property



Source: National Association of Home Builders, 2010

The inp /o p model di c ed abo e ha e al o been applied b re earcher o prod ce more locali ed informa ion on he cal effec of peci c affordable ho ing program and de elopmen . The follo ing are e ample :

- Hangen and Nor hr p (2010) anal e he effec of de eloping and rehabili a ing 582 affordable home in Rhode I land in 2007 and 2008 ing

[8] The one- ime cal effec of a 100- ni famil a credi proper i iden ical o ha of a marke -ra e de elopmen ; a re en e for a enior proper are mode l lo er beca e ni are maller and are h le e pen i e o b ild (Na ional A ocia ion of Home B ilder 2010, 2009a).

[9] The breakdo n of go ernmen re en e b he pe of a e and fee i er imilar for a 100- ni LIHTC proper for enior (Na ional A ocia ion of Home B ilder 2010).

$25 million in ho ing bond f nd and concl de ha he ac i i had a igni can impac on he income, corpora e, and ale a e collec ed b he a e. The a hor e ima e ha he $25 million in a e f nding le eraged an addi ional $231 million in in e men , and he b eq en income, corpora e, and ale a e and fee a ocia ed i h he o al economic ac i i increa ed a e re en e b ro ghl $16.7 million d ring he de elopmen period (e cl ding local a e and fee).[10]

- A d cond c ed b he Minne o a Ho ing Finance Agenc (2009) pro ide f r her e idence ha a p blic in e men in affordable ho ing can le erage igni can capi al and genera e real re en e for a e and local go ernmen . O er o ear (2006-08), an in e men of $260.1 million in affordable ho ing le eraged ro ghl $470 million in addi ional p blic and pri a e f nd and re l ed in nearl $1.4 billion in direc , indirec , and ind ced economic ac i i . Thi le el of ac i i genera ed ro ghl $62.5 million in a e and local a re en e.

- In an anal i of a propo ed Penn l ania a e ho ing r f nd, Econ l (2009) foc e on a e-le el impac and nd ha for e er $1 million in propo ed pending, he a e and o gain $82,000 in re en e from he con r c ion of ne affordable ingle-famil home ; one- ime a e re en e o ld be e en higher if he $1 million ere pen on he con r c ion of affordable m l ifamil ho ing ($86,000) or on remodeling or rehabili a ing e i ing home ($116,000). The e e ima e e cl de a e and fee ha local j ri dic ion ma impo e. Making he e e ima e e en more con er a i e, he do no incl de he impac of he con r c ion pending genera ed b an p blic or pri a e f nd ha o ld be le eraged b ho ing r f nd dollar .

- Zielenbach e al. (2010) cond c a cal anal i of nine HOPE VI projec and nd ha he de elopmen of affordable ho ing can repre en a igni can o rce of re en e for

[10] Thi incl de $4.1 million in ale a e , hich ome nonpro de eloper repor pa ing in Rhode l land according o a recen ne le er from Ho ingWork Rhode l land, he d pon or.

BigS ockPho o

Over two years (2006-08), an investment of $260.1 million in affordable housing leveraged roughly $470 million in additional public and private funds and resulted in nearly $1.4 billion in direct, indirect, and induced economic activity. This level of activity generated roughly $62.5 million in state and local tax revenue.

local j ri dic ion . One- ime cal impac ba ed olel on ale a e rela ed o he rede el- opmen ac i i (and income a e in he Di ric of Col mbia) range from $38,000 for a 120- ni proper o $612,000 for a projec i h more han 700 ni .[11] While b an ial, he e e ima e are igni can l lo er han ho e repor ed for a credi proper ie abo e beca e he e cl de fee collec ed b j ri dic ion (e.g., impac and permi fee), corpora e a e on b ilder , and re en e rela ed o indirec and ind ced pending.

- Wood (2004) pro ide a raigh for ard calc la ion of one- ime cal bene for a e and locali ie in U ah. The a hor e ima e ha more han 7,300 job and $200.1 million in b eq en earning are ppor ed ann all b ho ing con r c ion b idie , ren al b idie o landlord , and do n pa men a i ance pro ided o lo - and modera e-income ho ehold . Appl ing he a erage a e and local a ra e of 10.2 percen o he e e ima ed earning , Wood peg he re l ing cal impac a $20.4 million, hich i likel con er a i e beca e i ignore o her o rce of a e re en e ch a ale a e on con r c ion ma erial and corpora e a e on b ilder pro .

In addi ion o he e one- ime bene , he de el- opmen of affordable ho ing can ha e po i i e cal effec for locali ie in a arie of o her a . Depending on he a e paid and er ice recei ed b a ho ehold li ing in a ne ni , affordable ho ing can al o ha e a po i i e ann al ongoing impac on a m nicipali bo om line. Thi i e i re ie ed belo , a one of e eral h po he e ha are ppor ed b preliminar re earch b req ire addi ional in e - iga ion o re ne and con rm. In addi ion, in cer ain circ m ance , affordable ho ing con r c ion can increa e he al e of, and h he proper a e collec ed from, rro nding proper ie . The e idence for hi h po he i i re ie ed belo .

[11] Ongoing cal bene e ceed $1 million in fo r of he nine i e , b a he are primaril dependen on he higher income and igni can l higher proper al e charac eri ic of HOPE VI rede elopmen compared o he p blic ho ing he replaced, he are no repor ed here. Thi brief foc e on he bene of he ho ing in e men i elf and no on he bene ha accr e a a re l of di placemen or re iden rno er.

3. Homebuyers Who Participate in Affordable Homeownership Programs Are Less Likely to Experience Foreclosure Than Buyers Who Do Not Participate in Such Programs, Thereby Reducing Sometimes Significant Foreclosure-Related Costs for Municipalities

SUMMARY: *Multiple studies demonstrate that low- and moderate-income homeowners who purchase homes they can afford have a lower likelihood of mortgage delinquency and foreclosure than market-rate borrowers with subprime – and even prime – mortgage products. Given the substantial costs that local governments incur for each foreclosure, programs – whether subsidized or unsubsidized – that create opportunities for sustainable homeownership represent a smart, fiscally sound mechanism for promoting housing stability.*

The reduced foreclosure risk of affordable and sustainable homeownership programs: Re earch in o he ho ing marke do n rn ha con i en l demon ra ed he high ra e of foreclo re a ocia ed i h bprime loan made d ring he ho ing boom in he earl 2000 (HUD 2010; Immer- gl ck 2008; Kaplan and Sommer 2009; Immergl ck and Smi h 2006a). B con ra , lo - and modera e- income borro er par icipa ing in bo h b idi ed and n b idi ed program de igned o help hem

A national survey finds that homeowners in community land trusts are eight times less likely to be in the process of foreclosure than owners of market-rate homes.

cceed o er he long- erm are b an iall le likel han imilar *subprime* borro er o e perience problem i h heir mor gage .

- Ding e al. (2010) nd ha among lo - and modera e-income borro er i h imilar pro le , bprime borro er ere hree o e ime more likel o defa l on heir mor gage han ho e ho recei ed prime loan hro gh an affordable lending program ha pro ided o nd mor gage prod c i h more e ible lending andard .[12]

- A 2007 d nd ha he defa l ra e among par icipan in he Dalla (TX) Mor gage A i ance Program, hich pro ide ero-in ere econd loan for do n pa men a i ance and clo ing co , a onl 4.8 percen , compared o he 9.6 percen a erage for con en ional bprime loan (Federal Re er e Bank of Dalla 2007).

Some die ha e fo nd ha p rcha er of affordable home par icipa ing in a arie of program are le likel o e perience defa l or foreclo re han prime borro er or a erage borro er more generall . For in ance:

- A 2009 d of ci -ba ed affordable homeo n- er hip program in Bo on, Chicago, Lo Angele , Ne York, and San Franci co nd ha all e program ha e defa l ra e belo he a erage for heir ci , and ha o of nearl 9,000 lo -income familie er ed b all he program combined, he o erall defa l ra e a belo 1 percen (Reid 2009).[13]

- Ne York Ci ha par nered i h nonpro organi a ion o b ild or rehabili a e home a price affordable o lo - and modera e-income ho ehold . Of he 20,614 ch home old be een 2004 and March 2010, onl 13 ha e comple ed he foreclo re proce (Po ell 2010) a ra e of onl 0.063 percen .

- The Sof Second Loan Program in Ma ach e ha pro ided of econd mor gage loan [14] o more han 13,700 lo - and modera e-income borro er . In he hird q ar er of 2009, onl 0.75 percen of Sof Second borro er ere in he proce of foreclo re, compared o 1.39 percen of prime, ed-ra e loan in Ma ach e (Campen 2010), and he delinq enc ra e among Sof Second borro er a 5.7 percen , a compared o 9.3 percen for all mor gage in Ma ach e (Ma ach e Comm ni and Banking Co ncil).

- A na ional r e nd ha homeo ner in comm ni land r [15] are eigh ime le likel o be in he proce of foreclo re han o ner of marke -ra e home (0.56 percen compared o 4.58 percen a he clo e of 2009) (Thaden 2010).

One mode e cep ion in he li era re i he ca e of he Dalla Mor gage A i ance Program, ho e par icipan had a defa l ra e ligh l higher han he a e a a hole (4.8 percen compared i h 4 percen) be een 1997 and 2005. Ho e er, he defa l ra e of par icipan in hi mor gage a i ance program a 3.6 percen *lower* han he a erage for all FHA loan o er he ame period (Federal Re er e Bank of Dalla 2007), hich ma be a more repre en a i e compari on gro p.

[12] The Comm ni Ad an age Program help par icipa ing lender compl i h he Comm ni Rein e men Ac b pro iding an oppor ni o make loan in lo - and modera e-income neighborhood and o lo - and modera e-income borro er . Thro gh hi program, lender can pre er e he op ion of elling heir loan on he econdar marke hro gh a nonpro in ermediar , e en af er loo ening credi andard or req iring le ca h a clo ing for loan i h prime charac eri ic (e.g., ed in ere ra e , no prepa men penal ie , e c.).

[13] The program in each ci ar in erm of he a i ance a ailable and pop la ion er ed. Al ho gh Reid (2009) doe no elabora e on he peci c , a lea a fe program incl de ero-in ere deferred loan for do n pa men and clo ing co a i ance.

[14] A of econd mor gage i a econd, maller mor gage loan in addi ion o a r mor gage ha help o red ce a borro er do n pa men and i picall lo -in ere and/or forgi able o er a de ned period of ime.

[15] A comm ni land r i a form of hared-eq i homeo ner hip in hich homeb er o n heir ni , b a nonpro land r o n he land and re ric he re ale price in order o promo e long- erm affordabili .

Role of underwriting and education: In addi ion o he more affordable mon hl pa men of loan ob ained hro gh affordable homeo ner hip program , he li era re gge o e plana ion for he be er performance of affordable mor gage a compared o *subprime* loan , ho gh nei her ha been e ed in a con rolled d . The e incl de he fac ha affordable homeo ner hip program end o ili e ronger nder ri ing andard han bprime loan , and ha he generall offer fair, non-preda or loan erm (Hol man 2009; Reid 2009) a compared o he preda or prac ice of man (ho gh no all) bprime lender . A Reid a er :

> In direc con ra o he la nder ri ing andard ha ere pre alen d ring he bprime boom affordable homeo ner hip program doc men par icipan income , en re ha he ho ehold i able o make he mon hl pa men , and pro ide afe and raigh for ard loan prod c ha b ild, ra her han rip, eq i ⌐ (2009: 29).

For in ance, he d of he Dalla Mor gage A i - ance Program demon ra e ha onl 0.2 percen of borro er had e ere ho ing co b rden ,[16] gge ing ha he program nder ri ing proce pre en applican from borro ing more han he can afford (Federal Re er e Bank of Dalla 2007).

Addi ionall , all of he affordable homeo ner hip program men ioned abo e req ire par icipan o comple e ome form of homeo ner or nancial ed ca ion, hich ha been ho n o red ce foreclo re ri k igni can l (Ma er e al. 2009; Q ercia and Co an 2008; Har ar ka, Gon ale -Vega, and Dobo 2002; Hirad and Zorn 2001).

Municipal costs of foreclosure: The lo er incidence of foreclo re among affordable home , in rn, repre- en igni can direc and indirec co a ing for m nicipali ie in a oiding po en ial foreclo re . Direc m nicipal co of foreclo re em from a n mber of o rce , incl ding: foregone proper a e , ili re en e , and o her a e and fee ; proper main e-

nance ch a boarding and ra h remo al; record-keeping; co r and legal e pen e ; and demoli ion a p blic e pen e (Apgar and D da 2005).

Apgar and D da (2005) iden if 26 epara e direc (i.e., q an i able) co inc rred b m nicipali ie for he pro i ion of foreclo re rela ed er ice ⌐ and e amine he m nicipal co of e foreclo re cenario . The nd ha he co of foreclo re i minimal nder he be -ca e cenario (a foreclo ed proper i ne er acan and i old a a c ion). Ho e er, he middle ca e (in ol ing acanc , criminal ac i i , and demoli ion) co ld co a m nicipali more han $13,000 per proper . Co ri e o more han $19,000 in alka a ⌐ca e , in hich he o ner abandon he proper and he bank doe no of ciall foreclo e, and can reach $34,000 in he e en ha criminal ac i i a a alka a re l in a re before he home i demoli hed (Apgar and D da 2005).

In addi ion o he aforemen ioned co , foreclo- re al o e er do n ard pre re on home price , f r her e acerba ing problem in he ho ing marke and he broader econom ⌐ (HUD 2010: i). A an e ample, Immergl ck and Smi h (2006b) indica e ha one home foreclo re lo er he price of nearb ingle-famil home b , on a erage, 0.9 percen ; ha he do n ard pre re on ho ing price e end o ho e ha ell i hin o ear of he foreclo re; and ha hi nega i e impac i c m la i e, ch ha each addi ional foreclo re on he block lo er al e

[16] Ho ehold are aid o ha e a e ere ho ing co b rden hen mon hl ho ing co acco n for more han half of mon hl ho ehold income.

Che n Garden , Ma ach e Ho ing In e men Corpora ion, Co r e of MB Proper ie

an addi ional 0.9 percen . S ch decline in proper al e ha e he po er o erio l impac proper a re en e ha local go ernmen can collec o pro ide e en ial er ice o heir re iden . In C ahoga Co n , Ohio, for in ance, a ingle percen age poin drop in home al e mean an e ima ed $1 million lo in ci re en e and a $300,000 lo in chool di ric re en e (Li ing Ci ie 2010).

Depre ed proper al e , and b eq en l depre ed proper a e , are no he onl a ha foreclo re can erode a locali econom and a ba e. Neighborhood i h high le el of foreclo re ma req ire addi ional police pro ec ion o comba higher crime ra e (Be 2008; Immergl ck and Smi h 2006a; Spelman 1993), and affec ed ho ehold ma req ire higher le el of ocial er ice ch a food amp (Henr J. Kai er Famil Fo nda ion 2010) and homele er ice (Col in 2008; Wardrip and Pelle iere 2008). A long a federal, a e, and local program pro ide a afe, lo er-ri k a en e o homeo ner hip for lo - and modera e-income ho ehold , he direc and indirec co a ing o local go ernmen ho ld no go nno iced.

4. Affordable Housing Can Affect an Employer's Ability to Attract and Retain Employees and Can Thus Have Implications for Regional Economic Competitiveness

SUMMARY: *In surveys, many representatives of the business community report that a lack of affordable housing makes it more difficult to recruit and retain employees. Surveys also indicate that the business community recognizes the importance of affordable housing when making location decisions, and demographic trends suggest that given the alternative, mobile individuals will abandon areas with the highest housing costs for opportunity-rich regions with lower housing costs. In addition, to the extent that an affordable housing shortage forces workers to "drive 'til they qualify," a region may be faced with congested roads, which can reduce economic competitiveness.*

Affordable housing's role in attracting and retaining workers: The a ailabili of affordable ho ing near job ha been recogni ed b bo h emplo er and orker a an impor an a e . While fe die ha e direc l mea red he role of affordable ho ing on emplo ee a rac ion and re en ion, formal and informal r e con i en l demon ra e i percei ed role in a ibran econom . E ample incl de:

- In a na ional r e of more han 300 companie cond c ed b Harri In erac i e, more han half (55 percen) of he large companie (i h more han 100 emplo ee) ackno ledge an in f cien le el of affordable ho ing in heir pro imi . T o- hird of he e re ponden belie e ha he hor age i ha ing a nega i e impac on re aining q ali ed en r -le el and mid-le el emplo ee and ell more han half a rib e ome le el of emplo ee rno er o he re l ing long comm e (Urban Land In i e 2007).
- In he ame r e , more han half (57 percen) of he more han 1,200 orker polled a ha he o ld con ider mo ing clo er o ork if he co ld nd affordable ho ing near heir orkplace.

CASE STUDY #1: MONTGOMERY COUNTY, IN

Klacik (2003) in e iga e claim b local b ine leader ha he co n orkforce doe no ha e he kill o ll a ailable job . The a hor nd ha he demographic and ocioeconomic charac-eri ic of he Mon gomer Co n orkforce do no ppor he e claim and concl de ha i i orkforce q an i no q ali ha i hindering economic gro h in he co n . The co n i a ne impor er of orker , a circ m ance ha Klacik a rib e o minimal ho ing prod c ion and ho ing price ha are no in line i h local age . The implica-ion are clear: A more affordable ho ing ock o ld allo q ali ed orker and heir familie o re ide near Mon gomer Co n emplo men oppor ni ie , likel making he co n b ine e more prod c i e and pro able.

CASE STUDY #2: THE GULF COAST

Reco er effor in he G lf Coa pro ide ano her e ample of affordable ho ing impac on local economic de elopmen . In he ear follo ing H rricane Ka rina, emplo er in he G lf Coa i ne ed economic reco er lo ed b an in f- cien orkforce, hich b ine leader a rib ed in par o a lack of affordable ho ing. Re-emerging ind rie ch a hipb ilding and hing co ld no a rac he orker he needed beca e he comm ni ie co ld no ho e hem affordabl (Gille e 2007a, 2007b). Thi i a ion, hich a e acerba ed b he limi ed ppl of ho ing, generall , in he ake of H rricane Ka rina, er e a a ef l reminder ha affordable ho ing i an e en ial ingredien for cce f l economic (re)de elopmen .

Thi g re j mp o 67 percen for ho ehold i h ann al income le han $50,000 and 76 percen for re ponden be een he age of 18 and 34 (Urban Land In i e 2007).

- More han half of Miami-Dade Co n Chamber of Commerce member repor ha high ho ing co make i dif c l o recr i emplo ee (59 percen) and nega i el impac emplo ee re en ion (52 percen) (The Me ropoli an Cen er a Florida In erna ional Uni er i 2006).
- A r e of large and fa -gro ing companie in Ne York Ci fo nd ha ro ghl 64 percen belie e ha he local ho ing marke compromi e effor aimed a recr i ing and re aining emplo ee (McCall 1999).

Fe empirical die ha e e ed he emplo ee and emplo er percep ion recorded in he e r e , b one e amina ion of emplo er-a i ed ho ing (EAH) program gge ha affordable ho ing program ma con rib e o emplo ee re en ion. In her 2008 d of A rora Heal h Care EAH program, Ro (2008) fo nd ha par icipan had a longer a erage en re i h he compan han emplo ee o erall. In a imple compari on of rno er ra e be een all A rora emplo ee and A rora emplo ee par ici- pa ing in he EAH program, rno er a be een 6 and 8 percen age poin lo er for he la er gro p. Ro al o fo nd ha EAH par icipan ere con i - en l ra ed higher, on a erage, in ann al perfor- mance re ie han heir non-par icipan peer . No e ha he d a no able o e he direc ion of ca ali , o i remain nclear he her par icipa ing in he EAH program lead o lo er rno er and be er ork performance, or he her dedica ed emplo ee i h a long- erm ie are more likel o b a home hro gh he EAH program.

E idence o ppor he h po he i ha affordable ho ing, or a lack hereof, affec emplo er and regional compe i i ene co ld be reng hened b o rand of re earch. The r rand ho ld foc on he a in hich emplo er recr i men and re en ion effor are hampered b a lack of affordable ho ing or complemen ed b he a ailabili of affordable ho ing and corpora e effor ch a EAH. The econd rand, foc ing on emplo ee , ho ld in e iga e he role of affordable ho ing in bo h job- earch beha ior and job a i fac ion.

Affordable housing's role in attracting businesses: In a r e of compan e ec i e primaril in ol ed in elec ing he loca ion of ne facili ie , Gambale (2009) repor ha he a ailabili

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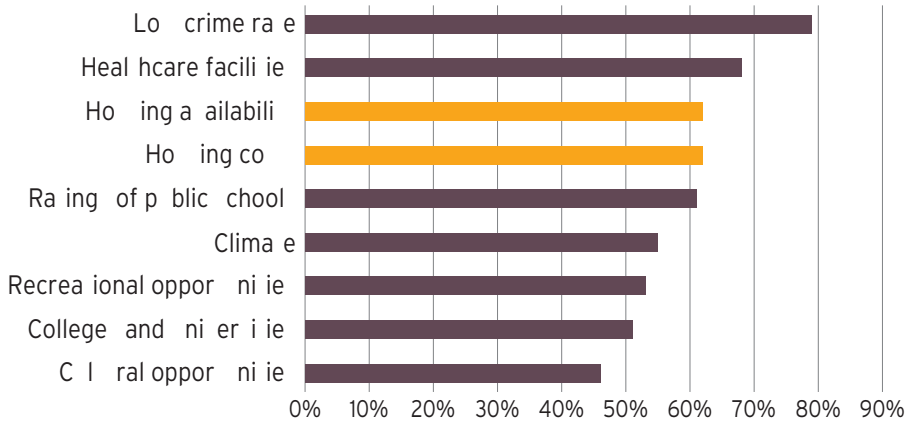
FIGURE 3. Relative Importance of "Quality of Life" Factors in Facility Site Selection



Source: Figure 25 in Gambale, Geraldine, 2009

and co of ho ing are impor an con idera ion for ro ghl 62 percen of re ponden (Fig re 3). Al ho gh ho ing i no a igni can a con idera ion a labor co or high a acce , for in ance, i rank behind onl crime ra e and heal hcare facili ie among all q ali of life‐fac or and ahead of fac or like he q ali of p blic chool , clima e, and recrea ional/c l ral oppor ni ie , gge ing ha affordable ho ing can ha e an impac on a region economic de elopmen pro pec .

Ba ed on nding from a r e of Ne York Ci large and fa e -gro ing emplo er , McCall (1999) repor ha 86 percen of re ponden belie e ha he ci ho ing ppl and co are barrier o a rac ing b ine e from o her loca ion , and ro ghl 79 percen belie e ha ho ing condi ion inhibi he forma ion of ne home-gro n b ine e . Three-q ar er of re ponden al o belie e ha o her region in [he] co n r [are] more a rac i e han NYC beca e of ho ing‐ (McCall 1999: 16).

Migration away from areas with high housing costs: Al ho gh he canno be ed o pro e an ca e-and-effec rela ion hip, migra ion pa ern appear o ppor he no ion ha ome ho ehold choo e lo er-co me ropoli an area o er he highe -co region . Be een 2000 and 2006, 23 of he 35 me ropoli an area in he U.S. i h he highe ho ing co (e.g., Honol l , San Franci co, Bo on, Ne York) lo pop la ion o dome ic o -migra ion, b an a erage of 6 percen . D ring he ame ime period, dome ic in-migra ion led o gro h ra e of 2 o 6 percen in ho ing marke i h a erage o abo e-a erage co (e.g., Minneapoli , Den er, San a Fe), gge ing ha he highe -co ho ing marke ha e ro ble compe ing i h le e pen i e me ro for mobile orker and heir familie (Bl e one, S e en on, and William 2009).

Foc ing on he ame rend , he Cen er for Con in ing S d of he California Econom (2009) no e ha he a e began e periencing dome ic o -migra ion

Between 2000 and 2006, 23 of the 35 metropolitan areas in the U.S. with the highest housing costs lost population to domestic out-migration, by an average of 6 percent.

in 2004 follo ing a period of e reme ho ing price gro h. O -migra ion began af er he median ho ing price in California increa ed from 60 percen abo e he U.S. median in 2001 o 130 percen abo e he U.S. median in 2004. A ho ing in California became rela i el more e pen i e hro gh 2007, he pace of o -migra ion accelera ed. The a hor admi ha hi co ld be a re l of homeo ner ca hing o heir home eq i and lea ing he a e for more affordable locale b al o pro ide an al erna i e e plana ion:

> On he o her hand he price gap red ced he incen i e for people from o her a e o mo e o California. In fac d ring he e ear Califor-nia ho ing naffordabili a probabl he principal compe i i e di ad an age facing he a e (9).

Whe her Californian ere lea ing i h heir eq i or non-Californian ere op ing for more affordable de ina ion , he impac of high ho ing co on he a e labor pool appear o be nega i e.

Chakrabar i and Zhang (2010) anal e ho ing and emplo men rend and ho ha an increa e in he ra io of ho ing price o income can lo he ra e of emplo men gro h in a regional econom . U ing da a for California ci ie be een 1993 and 2004, he a hor e ima e ha a one- ni increa e in hi ra io can red ce emplo men gro h b p o o percen in a o- ear period. (In o her ord , a ci in hich he median-priced home ell for hree ime he median ho ehold income co ld e pec o percen lo er emplo men gro h o er o ear han a ci in hich he median price i onl do ble he median income.) The e nding hold p hen he appl a imilar anal i o U.S. me ropoli an area be een 1980 and 2000. D e o da a con rain ,[17] he e nding ho ld be ie ed a gge i e ra her han concl i e, b he are con i en i h o her die linking high ho ing co o o -migra ion. Gi en ha a killed labor force i impor an o nearl 87 percen of compan e ec i e hen choo ing a i e for a ne facili ranking i h o of 35 fac or (Gambale 2009) a locali m offer an appropria e le el of affordable ho ing if i an o a rac killed orker , and, in rn, ne and e panding b ine e .

Economic liability of congested roads: In ci ie ha do no pro ide f cien ho ing ha heir orker can afford, e en ial emplo ee ma be faced i h long dail comm e , hich ma con rib e o raf c conge ion. Conge ed road can red ce he pro abili of local b ine e b increa ing opera ing co and b hrinking he area from hich b ine e can e pec o dra bo h c omer and orker (Cambridge S ema ic , Inc. 2005). Ci ie ha fail o addre conge ed road ma nd heir compe i i e edge lipping a a o more fa orable loca ion (Har gen and Field 2006: 38).

I and o rea on ha in e men in affordable ho ing de elopmen near job cen er or area i h good p blic ran i can help red ce he e en of ch a compe i i e di ad an age. Addi ional re earch i req ired o make he e plici linkage be een a lack of affordable ho ing near job cen er , raf c conge ion, and loca ion deci ion of ne or e panding b ine e , b he h po he ical connec ion eem o nd.

[17] Beca e i i dif c l o di cern he direc ion of ca ali in a regre ion anal i of ho ing price and emplo men rend (i.e., he her rela i e ho ing co are affec ing or being affec ed b job gro h), he a hor e in r men al ariable a pro ie for ho ing affordabili . Clima e ariable ch a mean empera re and precipi a ion le el are ed a pro ie for ho ing affordabili beca e he a hor nd ha he are rongl correla ed.

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5. In Addition to its Direct Effects, the Development of Affordable Housing Can Improve a Locality's Fiscal and Economic Conditions in a Number of Indirect Ways

Municipalities stand to gain from the development of affordable housing if the activity leads to appreciating values for nearby homes, thus creating a more robust tax base. While he concern ha affordable ho ing ma dri e do n proper al e i of en rai ed b local proper o ner , die are more likel o ho ha affordable ho ing ha ei her no effec or a po i i e effec on proper al e han he are o link affordable ho ing de elopmen i h a igni can decline (Cen er for Ho ing Polic 2009). Fac or ch a he pe of b id program, he reng h and abili of he neighborhood, he i e of he de elopmen , and ha i replaced (e.g., a acan lo) appear o pla a role in de ermining ho ne affordable ho ing ill in ence proper al e (Ellen 2007). In heir d of HOPE VI rede elopmen , Zielenbach e al. (2010) arg e ha i e loca ion, he den i in he rro nding neighborhood , enan income , and he reng h of he o erall real e a e marke in hich he projec i i a ed are among he fac or ha can affec ho cce f l he e effor can be a p rring local economic gro h.

Where he de elopmen of affordable ho ing doe ha e a po i i e effec on rro nding proper al e , he cal indfall for m nicipali ie can be igni can . A look a he de elopmen or b an ial rehabili a ion of 66,000 ni in Ne York Ci be een 1980 and 1999 nd increa ing home al e i hin 2,000 fee of ch ac i i (Sch ar e al. 2006). The a hor e ima e ha proper ie i hin hi di ance apprecia ed o ch an e en ha Ne York Ci co ld e pec ro ghl $2.8 billion in addi ional proper a re en e o er he en ing 20 ear (in 1999 dollar), hich more han make p for he ci $2.4 billion in e men in he program. Al ho gh hi ari hme ic doe no con ider federal and a e in e men in he projec , i doe ho ha he de elopmen of affordable ho ing can genera e igni can re en e for a m nicipali hro gh i impac on he al e of nearb proper ie .

In he ame ein b on a m ch maller cale, Walker (2010) anal i of a a credi projec in he Bron gge ha he proper rede elopmen led o igni can apprecia ion in nearb al e on he order of $22 million in aggrega e. A ming he ci rea e e he e neighboring proper ie , hi apprecia ion co ld genera e incremen al a re en e of $1.2 million ann all . A Walker a e : In effec , he ream of a pa men in ear af er ini ial a credi in e men repre en b an ial p blic recap re of he original o la (2010: 7).

Affordable housing programs bring housing costs below market rates, which in turn increases the money available for purchasing goods and services in the local economy. In addi ion o he im la i e effec of i con r c ion or rehabili a ion, affordable ho ing (he her ne or e i ing) can bene a local econom b red cing ho ing co o affordable le el , h crea ing more room in he famil b dge for local p rcha e .[18] A compari on of he 25 h percen ile ren i h he ren paid b p blic ho ing re iden ho ha re iden of p blic ho ing a e an a erage of $497 per mon h or almo $6,000 each ear an amo n eq i alen o 57 percen of heir ann al ho ehold income (Econ l 2007). U ing a imilar me hodolog and coming o imilar concl ion , Walker (2010) e ima e ha mon hl ho ing co for re iden in o Lo -Income Ho ing Ta Credi b ilding in he Bron are ro ghl $500 lo er per mon h han if he paid he Fair Marke Ren a do bling of he e re iden re id al income.[19] The e die con rm ha affordable ho ing make more mone a ailable o re iden o a i f heir non-ho ing need and likel re l in a igni can boo o local pending on ch e en ial a heal hcare and grocerie .[20] Lo -income familie end o pend heir re id al income o f l ll

[18] The ne gain for he local econom i ma imi ed hen he o rce of he ho ing b id i non-local (i.e., federal/ a e go ernmen or philan hropic) in na re.

[19] A de ned here, re id al income i he income lef o er af er pa ing for ho ing, ran por a ion, and ili ie he hree i em in he b dge ha are mo in enced b here one li e .

[20] S b idi ed ho ing allo re iden o pend more re id al income on non-ho ing good . There are man differen pe of affordable ho ing program , and each pe pro ide a ome ha differen le el of b id . The e en o hich a program increa e re id al income i dependen on he le el of b id pro ided: Tho e ha red ce ren far belo marke le el (e.g., p blic ho ing) ha e a grea er capaci o increa e re id al income han do ho e ha pro ide a hallo er b id (e.g., incl ionar oning). In addi ion, he e en o hich he e e pendi re bene he local econom i de ermined b hich non-ho ing good are p rcha ed, and from hich e abli hmen .

ba ic, b o her i e nme , ho ehold need (Bi en and Ed ard 2010), genera ing igni can immedia e economic ac i i . B con ra , higher-income familie are le likel o pend and more likel o a e increa e in re id al income, hich ha m ch le of an immedia e impac on he econom .

J a affordable ren and mor gage pa men increa e re id al income , o oo can he red ced ran por a ion co a ocia ed i h home b il in clo e pro imi o p blic ran i or job cen er . S die ha e ho n ha ho ehold ha li e in den e, mi ed- e comm ni ie i h acce o ran i and job pend le on ran por a ion han do ho e-hold here he a omobile i he onl iable op ion for mobili .[21] For orking familie earning be een $20,000 and $35,000 (in 2000 dollar), ho e in cen ral ci ie pend a igni can l maller hare of heir income on ho ing and ran por a ion co (54 percen) han do ho e li ing a grea er di ance from emplo men cen er (70 percen) (Lipman 2006). In order for lo er ran por a ion co o ran la e in o increa ed local pending on o her good and er ice , he combined co of ho ing and ran por a ion m remain affordable. Ci ie and a e can ili e a arie of program (e.g., incl ionar oning) o red ce ho ing co for lo - and modera e-income ho ehold in ran i -orien ed comm ni ie .

The ame principle applie o home ha are con r c ed or rehabili a ed in a manner ha b an iall red ce energ e. Wi h or i ho a b id , energ -ef cien home can igni can l red ce energ co for lo - and modera e-income ho ehold ,[22] increa ing he re id al income a ailable o mee dail need . A an e ample, he Uni ed S a e Depar men of Energ (2010) e ima e ha lo -income familie ho par icipa e in he federal Wea heri a ion A i ance Program red ce heir energ e pendi re b an a erage of $437 per ear. The e a ing can, in rn, f el local economic gro h: [M] one a ed from lo er energ bill can be plo ed b ne homeo ner in o ho ing-rela ed er ice ch a land caping and remodeling, leading o addi ional local emplo men oppor ni ie (Econ l 2009: 8).

In addition to increasing residents' residual income, the construction and rehabilitation of homes to make them more energy-efficient can have significant economic implications for localities that encourage or incentivize such practices. The en ironmen al bene of energ -ef cien home are rea on eno gh o p r e ainable b ilding prac ice , b energ -ef cien ho ing prac ice al o prod ce bene ha accr e o he local econom . The ario energ ra ing em and andard increa ingl adop ed in ne home con r c ion b and large promo e he e of local prod c . The heor i ha b ing ma erial prod ced locall , b ilder and, l ima el , con mer are able o red ce he embedded ran por a ion energ age a ocia ed i h con r c ion (U.S. Green B ilding Co ncil 2008: 81). The prac ice of b ing local and h ing ma erial prod ced b regional pplier , co ld ran la e in o more job and higher cap re ra e (i.e., le leakage) of he indirec pending a ocia ed i h ne ho ing con r c ion.

The economic de elopmen effec of he rend o ard energ -ef cien home are no limi ed o ne con r c ion. To he con rar , effor o make e i ing home more energ ef cien can al o increa e local emplo men and economic ac i i b crea ing a marke for green-cer i ed con rac or , killed con r c ion laborer , and con r c ion ma erial .

6. More Research is Needed to Evaluate Other Possible Ways in Which the Development of Affordable Housing May Contribute to Local Economic Growth

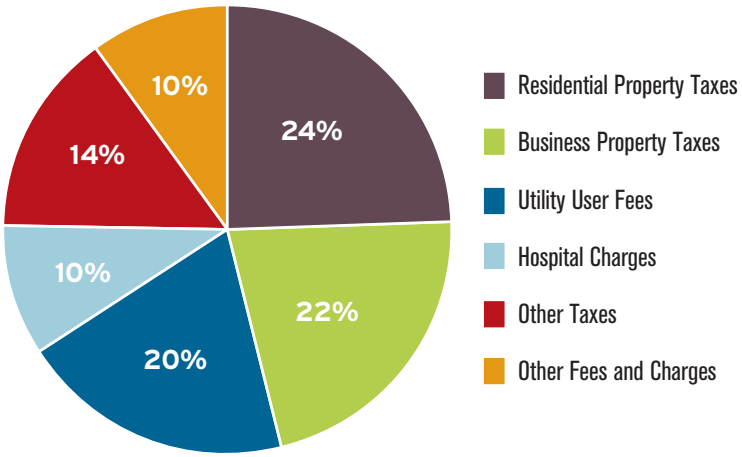
When revenues generated by occupants of affordable housing exceed the costs of providing services, affordable housing could generate ongoing fiscal benefits for communities. In addi ion o he re en e ha locali ie gain d ring he con r c ion pha e, local go ernmen can e pec o recei e re en e (i.e., a e and fee) from he occ pan of affordable ho ing in he ear af er i i b il . E i ing re earch gge ha ongoing ann al a

[21] The Cen er for Ho ing Polic , he Urban Land In i e, and he Cen er for Neighborhood Technolog ha e collabora ed on hree repor ha e plore combined ho ing and ran por a ion co in hree region : Wa hing on, DC (*Beltway Burden*); he San Franci co Ba Area (*Bay Area Burden*); and Bo on (*The Boston Regional Challenge*). The e repor can be fo nd a .nhc.org.

[22] For more informa ion on hi opic, plea e refer o he Impro e Re iden ial Energ Ef cienc oolki a .ho ingpolic .org.

re en e from affordable ho ing can be b an ial. For e ample, in i anal i of o h po he ical 100- ni a credi projec , he Na ional A ocia ion of Home B ilder (2010) e ima e ha ongoing ann al re en e from he e famil and enior proper ie are $441,000 and $395,000, re pec i el . The hree large o rce of he e rec rring re en e are re iden ial proper a e , proper a e from he b ine e ppor ed b he re iden , and ili er fee (Fig re 4).

FIGURE 4. Ongoing Sources of Local Revenues for a 100-Unit Family LIHTC Property



Source: National Association of Home Builders, 2010

B a re en e are onl one ide of he eq a ion. Whe her b idi ed or marke -ra e, a re iden ial de el- opmen can be aid o ha e a ne po i i e cal impac onl if a e e ceed he co of pro iding er ice o he re iden er ice ch a ed ca ion, heal h and ocial er ice , police and re pro ec ion, and ani a ion. In order o e ima e he ne ongoing cal impac of affordable ho ing, f re re earch ho ld foc no onl on f re a re en e b al o on he co of pro iding er ice o ho ehold member . The follo ing die addre hi i e in par b do no pro ide concl i e e idence for affordable ho ing:

- An anal i of *market-rate* ho ing b he Na ional A ocia ion of Home B ilder (2009b) gge ha ba ed on he a erage co of pro iding infra r c re and er ice o ne ho ehold , ho ing con r c ion repre en a o rce of ne income for man local go ernmen no long af er de elopmen . The ann al re en e genera ed from 100 ne , occ pied marke -ra e apar men e ceed he co of er ice (ch a ed ca ion and la enforcemen) b ro ghl $92,000 ann all in he ear af er comple ion. Wi h hi rpl , he a erage locali can pa off i ini ial in e men in infra r c re i hin en ear of con r c ion. The e re l are likel con er a i e beca e he a me ha (a) local j ri dic ion pa for almo all a ocia ed infra r c re co (e cep high a and road) i h no con rib ion from de eloper and (b) here i no e i ing infra r c re capaci o ppor an of he 100 ne ho ehold .
- A d b he Bl e Sk Con l ing Gro p and he Cen er for Ho ing Polic (2010) e ima e ha e en af er e eral ear of eep decline in home al e , he *median-priced home* in California genera e more a re en e han i con me in go ernmen er ice ann all and, on a erage, ha a po i i e cal effec on a e (+$1,869), ci (+$262), and co n (+$45) b dge each ear af er i i b il and occ pied. The d incl de a en i i i anal i in hich he ale price i adj ed b o her fac or ha affec a home cal effec remain nchanged. For home ha ell for 25 percen belo he median price, he a hor repor a po i i e ongoing ann al cal impac of $928 for he a e and $140 for California ci ie . The ongoing ann al cal impac of he e lo er-co ni i ligh l nega i e for co n ie o erall (-$50 per ear) b i po i i e hen con r c ion occ r in an incorpora ed area (+$115 per ear), a i he ca e for fo r- f h of a e ide ac i i .

Al ho gh more re earch i needed o con rm he re l no ed abo e for differen pe of affordable ho ing, he e die pro ide empla e for f re anal e in e iga ing he e en o hich lo -co or b idi ed ho ing genera e ongoing cal bene .

The development of new affordable housing could create spillover effects in the form of local consumer activity, employment opportunities, and private-market investment. Li le re earch e al a ing he impac of affordable ho ing de elopmen on pillo er economic ac i i co ld be fo nd in hi re ie of he li era re. A i h o her form of p blic in e men , a large- cale (re)de el-

opmen of affordable ho ing co ld rea onabl be e pec ed o p r he pri a e marke o re pond i h i o n in e men in re iden ial, re ail, or commercial real e a e in he rro nding area. B o da e, here ha been li le in e iga ion in o he her he impac of affordable ho ing con r c ion i limi ed o ho e modeled abo e, ba ed primaril on he con r c ion and occ pa ion of he ne ni hem el e , or he her hi in e men can crea e he energ o j mp- ar a elf- aining ro nd of pillo er economic de elopmen in neighboring area .

In one anal i ha a emp o direc l e hi h po he i , Higgin (2001) in e iga e he po en ial pillo er effec of homeo ner hip program offered b comm ni de elopmen corpora ion in e neighborhood . In one Sea le neighborhood, he a hor concl de ha he de elopmen of 154 affordable for- ale home pla ed a primar role in a more han do bling of re ail ale in he icini , compared o a 32 percen ci ide increa e. Addi ionall , a erage commercial real e a e ran ac ion in he neighborhood do bled from $4 million o $8 million ann all . Increa e in re ail ale in a econd neighborhood ere limi ed o b ilding ma erial and f rni re, and da a ere no a ailable for he o her hree ca e die .

In a d in e iga ing po ible pillo er effec rela ed o HOPE VI rede elopmen , Zielenbach (2003) goe be ond andard q an i a i e anal i and cond c in-dep h in er ie a o i e in Mil a kee and Sea le. He nd ha replacing b andard p blic ho ing i h ne affordable ho ing ha con rib ed o more po i i e percep ion abo f re economic gro h and, in fac , ome le el of re iden ial and commercial in e men in rro nding neighborhood . Ho e er, Zielenbach ca ion ha he e HOPE VI rede elopmen ha e been onl one of e eral cri ical fac or (2003: 650) ha ha e led o re i al- i a ion, o pillo er effec canno be olel a rib ed o he affordable ho ing ac i i i elf.

A he e die ill ra e, he in e iga ion of pillo er effec i hindered b a carci of a ailable da a. In ead, re earch on he a in hich affordable ho ing de elopmen affec neighboring comm ni ie almo ni er all relie on he change in al e of nearb proper ie . Thi informa ion i more readil a ailable and i een a an accep able pro for o her po i i e o come beca e, a Ellen (2007) a e : o he e en ha an of he e o come occ r, he ho ld be capi ali ed in o, or re ec ed in higher proper al e . P impl , if a neighborhood become a be er place o li e, people ill be illing o pa more o li e here (4).

Al ho gh he de elopmen of affordable ho ing doe no con i en l affec rro nding proper al e in he ame manner likel beca e he pe, cale, and con e of each de elopmen can differ in impor an a e i ing re earch ha more freq en l a ocia ed i i h no impac or ri ing al e han i h declining al e (Cen er for Ho ing Polic 2009). A bod of re earch al o gge ha ri ing proper al e can re ec impro ing neighborhood condi ion and po i i e comm ni change (Walker e al. 2002; al o ee re earch ci ed in Gal er, Ta ian, and Accordino 2006). Taken oge her, he e rand of re earch gge ha he de elopmen of affordable ho ing can po i i el in ence condi ion in he rro nding neighborhood. Ho e er, he affordable ho ing eld o ld bene from addi ional re earch ha more direc l in e iga e he her he de elopmen of affordable ho ing enco rage b eq en , n b idi ed pri a e in e men no c rren l cap red in he andard inp / o p model , hich are de igned o mea re he impac of onl he ini ial ho ing in e men i elf.

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